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Urban Happiness from Mobility in Neighborhoods and Downtown: The Case of the Metropolitan Area of Aburra Valley

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Abstract

The entrepreneurship on mobility leading to an improved quality of life should be an initiative of young people living in the different neighborhoods of a city. They can even design exemplary models of territorial ordering for responsible mobility. Young people with some degree of university education are more sensitive to the value of designing more humane cities. Hence, all social transformation in citizen co-responsibility has its origin in feelings of empathy, that is, in the search for urban happiness for the achievement of a dignified human life. The research question is how to motivate youth social entrepreneurship in city neighborhoods for mobility and strengthening of citizen culture. The research methodology was based on 710 surveys on Quality of Life and Urban Mobility in the Aburra Valley applied to young university students in their last semester and eight interviews with youth organizations and municipal secretariats of citizenship, and mobility. The study conclusion is that if more than 90% of daily visitors to the city downtown live in the surrounding neighborhoods, then the strengthening of civic culture must begin in those neighborhoods. If the suburban area is organized, the downtown will be organized.

Keywords: Social Entrepreneurship, City of Learning, Urban Mobility, Citizen Responsibility, Urban Happiness

JEL: D71, D72, D78, H31, H41, H52, H53, I31

"How can you know what to do with vehicle traffic without first knowing how the city works and for what else its streets are needed? People don't know what to do with cars in the streets, because they don't know either how to develop a functional and vital city, with or without cars".
Jane Jacobs (2011, p. 33)

Brief characterization of the Aburra Valley metropolitan área

The Aburra Valley metropolitan area is the most important in Colombia, covering an area of 1,157Km² and consisting of 10 municipalities: Caldas, Sabaneta, La Estrella, Itagui, Envigado, Medellín, Bello, Girardota, Copacabana, and Barbosa. The core city is Medellín, capital of Antioquia, internationally recognized as a Discovery City of Innovation and Learning (*El Colombiano* newspaper 21/06/2019). The Aburra Valley is located

between two large mountain ranges that provide scenic beauty and freshness. According to the Department of National Statistics, the metropolitan area has a population of approximately 3,800,000 inhabitants, as well as an industrial park with 535 large, 1,643 medium-sized, 5,900 small, and 71,302 micro-companies. The informal sector of the economy accounts for about 53% of the employment, the public sector for about 11%, and the private sector for 34% of it. Approximately 80 percent of the population earn less than 3 minimum wages -US\$916 per month; 12 percent earn between 4 and 10 minimum wages and 8 percent earn more than 11 minimum wages per month (DANE, 2018).¹ The municipalities of Medellin, Sabaneta, Itagui, Copacabana, and Envigado have been recognized nationally as having the top quality of life since the beginning of 2000 among the 1,122 local administrative circumscriptions of the country.

Introduction

Creative economies, unlike the market economy, are based primarily on social entrepreneurship projects in response to local needs. Creative ventures are born from the resilience of local inhabitants, through their imagination cities reduce the decline of the quality of life in their territories (Duque, 2018). Adam Smith, in *Research on the Nature and Causes of the Wealth of Nations* says:

People define their needs according to local customs to provide the goods required for a dignified life, whose lack would be, in a way, unseemly among people of both high and low reputation. The non-consumption of these required goods, either through habit or lack of income causes embarrassment. An honest day laborer would blush if he had to appear in public without shoes. The custom requires the use of shoes as mandatory, so no person of either sex would dare to appear in public without them. (1997a, p. 769)

In other words, local needs change among inhabitants of different countries, territories, and localities, depending on residents' stock of knowledge and solidarity; in other words, on local developments that are socially achieved. While in a developed country telecommunications are by satellite, in a developing country they are by aerial cable, or while for a family in an upper-class area in Medellin the most pressing need is to buy a new car to replace the five-year-old one they own; in a lower-class area, other families' need is to paint the facade of their homes. If human beings are by nature social beings (Smith, 1997), the fulfillment of needs becomes a common language, in what is habitual or natural, in what is communally accepted because it is connatural to all (Muñoz Cardona, 2017, p. 19).

Hence, to avoid social decay among the lower social classes and to level up them to more socially acceptable ways of life, the Scottish Adam Smith, advises (1997a, p. 688) to show the inhabitants of poorer municipalities the way the inhabitants of richer localities live so that the former individuals will be aware that there are other ways of life. That is, that there are better and more organized ones; so they will seek, by nature, how to work to reach them, how to improve the conditions in which they currently live. In this manner, the country and the city will avoid the social decline of the poorest, preventing the surge of worse future evils in the due social order (Smith, 1997, p. 228-230).

If we start from the organization of the city around the satisfaction of common needs, then, we can be based on three main assumptions: first, man is by nature a social being; second, man is by nature a sentient being; and third, man by nature seeks what is good or better for himself and his people. It may be stated that the human being learns from experiences and is able of sympathizing with others, that is, he is a sensitive-rational being, perfectible, loving what is good for himself, his own and others; since his well-being is linked to the well-being of those who make up the locality (Smith, 1997, p. 228).

In contemporary societies, technology and developments in telecommunications close gaps among populations. Both show and model ways of life that invite change, increasing citizens' awareness of the possibility to propose

¹ The minimum wage in Colombia for the month of November 2020 is equivalent to US\$272 per month or 227€.

and improve their habitats. These societies become places of learning that are transformed from their very foundations of community and social organization (Muñoz and Quintero 2020).

This is the base that explains why social innovation, community unity, and youth initiatives are at the heart of contemporary economies (Jacobs, 2011, p. 58). There is the case, for example, how a young Lebanese engineer at the celebration of Mother's Day in his country on March 21, 2020, in the face of the world coronavirus pandemic, delivered roses with a drone in the hands of the recipients. The profits were given to social organizations to treat the deadly disease. Initiatives like this, mitigate needs, avoiding sons' feelings of shame, becoming a pride for the creators, like the young engineer, who solved the needs for Mother's Day delivering an outstanding example of national solidarity.²

Similarly, 13 youths from the city of Medellin became friends through the link "@deldichoalhechocol", and with a capital of US\$5,548 went out in three vehicles to help street vendors in several parts of the territory, who, because of their economic hardship, cannot keep up with the quarantine set up by the government to control the pandemic. These youths helped 20 people and created a large network of solidarity.³ There are other examples of community leadership among young people nurtured by the vocational training centers, some of them working with the Integrity Centre of the EAFIT University, the project of Integrity, Respect, and Tolerance: #RespetoIn EAFIT and the Centre for Ethical and Bioethical Research of the Pontifical Bolivarian University.

Through the link #DonatonPorMedellin, the EPM Foundation and the city mayor collected, in just 14 hours, more than 100,000 food baskets and more than US\$3,693,815 for the families most affected by the work stoppage due to the quarantine. It was a great day of solidarity among citizens, businesses, municipal government, and young local artistic union with the city, a show of love for the city and its citizens.⁴

These events have gained strength and social visibility over than those carried out by an opportunistic employer who, taking advantage of his position as a public officer provided 50 wheelbarrows to be loaded with fruit and given to Venezuelan migrants to sell downtown. The daily sales are collected by a manager who pays them only US\$6 per day; as these informal activities are not fully transparent, the officer's name and position are withheld. This business model of non-citizen responsibility has spawned social disorder, mobility problems, and accidents in the downtown area. There have been fatalities of 225 pedestrians in the 2018-2019 period. (Focal interview of Urban Mobility of Medellin, 2019; Osorio, *El Tiempo* (11/02/2019)). As Ana Marin Morales points out in her web article: *The Colombian Dream: Drawing the New Routes* (15/02/2019),⁵ where she claims that the wheelbarrow becomes the first means used by immigrants in the city of Cucuta to haul several kinds of merchandise and get some money. This is an uncontrolled system of informality, as stated by Wallerstein in 1974 and Lefebvre in 1991, both authors quoted by Ana Marin (15/02/2019).

The borderland between Venezuela and Colombia is a marginalized area. In his book *The Modern World System* (1974) Immanuel Wallerstein calls this a peripheric territory that—in the absence of the state—is managed by informality. These dynamics are set by those who perform the space daily as Henri Lefebvre would say in *The Production of Space* (1991)—in other words: migrants, merchants, mafias. Their needs and the economic opportunities emerge out of a profound social change. The *rebusque* (a word in Spanish that explains the unimaginable local mechanisms to find an income—for sure not regulated by the state) therefore leads the owners of lift dollies to identify a promising business in the crossing-points where migrants need to carry their belongings. Lift dollies are a non-regulated business where tariffs are negotiated between the lifter and the client, and calculated on the pieces of luggage, and distance (Marin, 15/02/2019).

² For more complete information see website: <https://www.panorama.com.ve/novedades/Las-entregan-drones-Madres-libanesas-reciben-rosas-en-su-dia-20200321-0031.html> Cases like this became a worldwide example, most of the initiatives led by young people with a vision of social entrepreneurship and a vocation for servant social leadership.

³ For more complete information see website: <https://www.elespectador.com/coronavirus/jovenes-en-medellin-donan-dinero-trabajadores-informales-afectados-por-cuarentena-articulo-910401>

⁴ See website: <https://www.elespectador.com/noticias/nacional/antioquia/la-donaton-por-medellin-supero-los-10000-millones-articulo-914310>

⁵ See website of the London journal ROUTED: <https://www.routedmagazine.com/colombian-dream>

Social entrepreneurship should not be confused with community leadership. While the former has a connotation of business with benefit to a specific community, the latter refers to searches for administrative forms of the territory (Muñoz and Martínez, 2020). The social entrepreneur is generally altruistic doing business for the benefit of the community and belongs more to the model of the cities of innovation. Community leadership, as an administrative vocation, values a person's human nature, so it seeks equity and social justice; it belongs more to the model of the cities of learning, as shown by the interviews conducted with the Youth Boards of the Aburra Valley metropolitan area.⁶ Community leadership is not based on social, political or religious prejudice. It is based on the integration and commitment of all community members to the achievement of the common goods demanded by the neighborhood.

From this perspective of contemporary practical philosophy, community leadership is the product of a model of social construction, based on the formation and strengthening of feelings of empathy and solidary action. While some social movements and political parties believe that community leadership results from a particular action, this research paper presents it as an action that gains strength within social support, that is, it goes beyond personal efforts. For, while the idea may be born in an individual, the achievement of the goal demands community support; for man is by nature a social being, which goes far beyond the personal self (Muñoz Cardona, 2017).

Having made the above clarifications, this research paper shows the importance of community leadership in the construction of urban happiness. To this end, universities and social organizations must train pedestrians, neighbors, and drivers in the duties of co-responsibility. Demanding and compulsory road education programs should be designed to help improve suburban mobility; models of learning cities should be adopted based on generalized citizen awareness, as proposed by the economist Muñoz Cardona (2017) in the *Ethics of Citizen Responsibility*.⁷

Some concepts of urban happiness from mobility

Urban Happiness in Mobility accounts for the real and effective spaces that people have for enjoying open spaces, for walking together and making use of their natural language abilities: speaking, gesturing, socializing, and learning from others, and even from the other (Fernandez, 2019). In cities more advanced in mobility in Canada, Europe, and Latin America, the moderate or minimal gestures and the look of astonishment of prudent pedestrians educate the reckless; the uneducated who risk their health, tranquility, and emotional well-being of others (Ribetto, 2014).

Hence, Law 1625 (2013) in Colombia invites citizens and localities to improve the conditions and quality of life in public spaces through educational and cultural programs that seek collective welfare. For instance, Article 536 of the Land Management Plans, Law 388 of 1997, and Article 278 of Law 1955 of 2019, have included mechanisms for financing public space and infrastructure projects, that can be funded through the securitization or the issuance of public debt bonds to be repaid in the future according to the valuation of the land.

However, the lack of civic education for the adequate use of public spaces in neighborhoods in large cities of the Aburra Valley of Metropolitan Area, together with the population growth, the increasing number of vehicles, and the delay in the development of road infrastructure for mobility, make these places unsafe for pedestrians with reduced mobility, pregnant women, children and the elderly. These inculturations on the neighborhoods are moved to the downtown area. This increases the accident rates and makes the use of public spaces are danger culturally.

⁶ The Youth Table was created under Law 1885 of 2018 in Colombia. One of the main definitions of the Youth Table in Article 5 is: They are spaces for youth participation. These are all those forms of concertation and collective action that integrate a plural and diverse number of organizational processes and practices of young people in a territory. The Youth Tables are made up of young university students, mainly from the human sciences, plastic and social arts. It is also made up of social leaders with low levels of education, especially would be seconded. They are very sensitive to the social and economic problems of their communities.

⁷ Learning cities are cities that transform and progress on the basis of communal initiatives for the administrative organization of the territory. They are resilient cities, that is, capable of learning from experience. Learning cities are cities where everyone learns from everyone. Generally, the poor neighborhoods have young university students who study at the best public universities in the city. They are the fundamental raw material of change. They are people who know how to listen and transform craft ideas into technical ideas. Community ideas that are successfully transformed into real ideas become public administrative examples, and can become part of local government agendas.

Jan Gehl says in *Cities for People* (2014): “*Urban obstacles, noise, pollution, lack of space, the risk of accidents are the commonplace faced daily by passers-by in public spaces.*” (Gehl, 2014, p. 3). Jane Jacobs pointed out in *Life and Death of the Big Cities* (1961) how the massive rise of the automobile and the urban ideology of horizontal properties end up destroying space in the vitality of urban life. These cities are losing their community vitality, as Peter Besserman said (1998). Even in the enclosed urbanizations of horizontal property, the community vitality is scarce, as happens in enclosed places that meet only once a year to define the administrative fees for the next year. A city within the city equally solitary, with common spaces rarely used by the co-owners (Jacobs, 2011, p. 74, 92).

Hence, the importance of the public expenditure made in the last ten years by the big cities for the revitalization of urban life; investing in infrastructure to improve spaces and conditions of pedestrian mobility. At the beginning of the 90s in Colombian cities as Bogota, Medellin, Manizales, Sabaneta, and Envigado, the resident co-owners of closed units enjoyed more and better green spaces than the rest of the citizens; and although they were the most expensive housing units to live in because of administrative fees, they were the safest. It was an unavoidable opportunity cost for young couples seeking to have family in safe places.

Since 2000, the most dynamic capital and middle-size cities in the world have made deep changes in the design of urban space: new routes for bicycles, electric scooters, pedestrian walks, cultural boulevards. Pavements have been designed considering the blind and other handicapped people, electronic pedestrian crossing lights, and sound warnings. These urban changes have attracted international recognition, and have followed three models of cities: innovation, knowledge, and learning (Muñoz Cardona, 2019).

However, suburban or peripheral areas lack the same control over vehicle traffic; most homes have no parking spaces. Hence the need for urban space planning that includes not only central commercial areas that generate wealth and employment on a large scale, but also suburban residential areas, where high-value land investments do not exist. In other words, those are the places where working-class families live. A more vital, sustainable, and safe space planning of urban space for pedestrian mobility is needed. It is required an allocation of public resources to the neighborhoods that form and encourage the citizen culture of respect for public space (Jacobs, 2011; 1961; Gehl 2010; Campanella, 1995).

Public spaces that invite walking and motivate the gathering of the whole community, that facilitate socialization among the different populations; as offered by open-air gyms, cafeterias with outdoor service, pedestrian walking-areas oriented to promote cultural interpersonal relations, and enhance the value of local housing (Lora, Powell y Sanguinetti, 2010). A city without borders, that is inclusive and safe, because it induces the existence of vigilant eyes and the active circulation of the people who live in and visit the place, as they claim (Gehl, 2014, p.6; Jacobs, 2011, p.93, 127).

A city of lively streets that invite you to walk or cycle through them. Such places deepen feelings of empathy, encourage sporadic friendship, benefit the economics of formal commerce, reduce levels of population stress, as well as factors of violence, greenhouse gas emissions, cardiovascular diseases due to sedentarism, and noise levels. Cities that promote respect among neighbors.

Public spaces where the intellectual activities blend well with cultural and artistic activities, as Tommaso de Campanella proposes in the *City of the Sun* (1995), are places for the education of the senses; they are more supportive and humane urban environments. The Carabobo Pedestrian Walk in Medellin, for example, integrates government administrative facilities -La Alpujarra Administrative Center - with the art in the Plaza Botero Museum, the Archaeological Museum of the University of Antioquia, RUTA³, the astronomical observatory - Planetarium of Medellin- and the recreational with the outdoor movie theater: Explore Park and the North Park with mechanic attractions for children and adults. Each of these points is connected by the METRO mass transit system and municipal bike rental stations on well-signposted routes.

Says Jan Gehl: “*the interest in a human dimension within the territorial approach is a reflection of the demand for a better quality of life*”(2014, p. 7), better enjoyment, more urban happiness. These investments in public

mobility generate a highly elastic external effect on the common well-being, as more pedestrian spaces can be replaced by less vehicle spaces, generating a healthier population and a reduction in costs for medical treatment; increased efficiency in local government expenditures; more pedestrian paths integrated with public transport systems; as happens in other knowledge and innovation cities around the world.

These new approaches support a more robust culture and civic virtue. They are stages, in terms of Campanella (1995), to show how a better citizen behavior can be achieved, teach the importance of public space, and educate the senses through playful programs that favor awareness, just as METRO Culture does in the Aburra Valley (Muñoz Cardona, 2019).

For some municipal administrations, monies are more important as collections related to vehicle traffic fines, rights from the registration of new vehicles, fees at the road booths, and fines for violations to traffic lights, than they are for the purpose for which these monies are exacted: maintaining and extending the road network. In other words, vehicle taxes are more important as a tax collection *per se* than as a management tool. The competition between different municipal transit offices, for instance, prioritizes the number of vehicles registered, thus overloading road capacities and increasing the number of accidents involving pedestrians.

The town planner Gehl says: *“For several decades now, the human dimension has been minimized as a matter of concern within urban planning, while other issues, such as managing the constant increase in vehicular traffic, have become paramount”* (2014, p. 3). The absence of responsibility and co-responsibility of the Traffic Secretariats favors disorder in the use of public spaces in neighborhoods and downtowns.

Case study methodology

If we ask ourselves: how to reduce the phenomena of conurbation in mobility, That is, how can we improve the citizen culture regarding mobility? How can we achieve more responsible citizenship through the use of public mobility spaces or how to strengthen the citizen culture for mobility in the neighborhoods of the big cities in the Metropolitan Area of the Aburra Valley? The study assumed that well-trained young people live in poor neighborhoods of several cities in the metropolitan area. In agreement with Anna Yeatman (1987), it is possible to formulate the following hypothesis for research: *“If the sensitivity and knowledge of the young university student living in the city's neighborhoods are harnessed, it is possible to recover the culture of citizenship and reduce the inequalities in living conditions that exist between different localities”*.

From the previous assumption and hypothesis, the research groups of Government, Territory, and Culture of the Superior School of Public Administration of Antioquia, together with the group of Organizational Studies of the doctorate of the Autonomous Metropolitan University of Mexico, carried out a local study of urban happiness for mobility, in 15 poor neighborhoods with the highest population density following an inductive-exploratory methodology.

If young university students from the last term live in the most densely populated poor neighborhoods of the Aburra Valley, then how can we motivate youth social entrepreneurship in the city's neighborhoods for mobility and the strengthening of citizen culture? The research was based on 710 surveys applied to young university students in their final semester of professional training in the Aburra Valley region's public universities, where young people from the poorest urban neighborhoods generally study.

The first condition for the survey was that it had to be carried out only with young people from the last university semester who were born in the territory and live in the most densely populated neighborhoods of the metropolitan area. The second condition was to take the universities of Antioquia, National University of Colombia, School of Public Administration. Metropolitan Technological Institute Antioquia. The third condition was to select quotas by profession to grant a statistical confidence index of 95% and a margin of error of 5%. Besides, eight focal interviews were carried out with the Municipal Youth Bureau and the Secretaries of Citizenship and Mobility, which allowed them to understand the richness of transformative ideas of mobility in their territory.

The study evaluates through questions on city equipment the levels of satisfaction with the quality of public spaces in paved areas for pedestrians, sports venues, pedestrian walks, paved roads, cycle routes, road signs, traffic control, outdoor gyms, libraries, museums, cultural parks, houses of culture and theatres. The evaluation included the satisfaction of the young university students with the safety of the neighborhood and the existence of medical and hospitalization centers.

The answers were cross-checked with interviews with passers-by and socialized in mobility forums carried out by the Metropolitan Area with FundaPeaton.

Case Study

Satisfaction with the road and cultural city equipment

The aim is to find out how satisfied young university students studying in the Aburra Valley are with the city's public spaces, that is: how humane are the cities that make up the big city in the metropolitan area, or how well designed they are for people's enjoyment? To this end, 710 surveys were conducted for a level of statistical confidence of 95% and a margin of error of 5%.

Satisfaction with the enjoyment of natural resources, quality of recreation services and the neighborhood.

According to Table 1, the 71.5 percent of young university students in their final semester say they are satisfied and very satisfied with their neighborhood. This research data is very significant if we take into account the violence that the different neighborhoods and communes of the Aburra Valley metropolitan area endured in 2018 and 2019.

Table 1: Aburra Valley. Citizen satisfaction with

Satisfaction Level	Natural resources	Leisure and recreation	Neighbourhood
1	1.9%	2.2%	3.7%
2	3.2%	4.5%	5.9%
3	18.0%	19.5%	18.8%
4	40.5%	35.1%	30.1%
5	36.4%	38.7%	41.4%
Total (710)	100.0%	100.0%	100.0%

Source: Centre for Regional Economic Studies CEER of SSPA and the research group Government, Territory and

Culture of Antioquia (2018-2019). Satisfaction level: 1 is not very satisfied. 5 is very satisfied. 3 regularly satisfied. In fact, 64.8 percent of university students say they are satisfied and very satisfied with the security of the suburb in which they live, and 26 percent say they are moderately satisfied. In other words, only 9.2% say they are dissatisfied and very dissatisfied.

The result of the research is highly relevant because it shows the importance that young community leadership can have in their localities by feeling comfortable with their neighborhood by more than 71.5% (see table 1). That is, it shows the possible impact on the will to transform, that added to their professional training would become an opportunity cost with a high marginal benefit.

As for the places of leisure and recreation offered by the big city in the metropolitan area of Valle de Aburra, 73.8% of young university students in the last semester claim to be satisfied and very satisfied (see table 1). According to the students evaluated, the gymnasiums in open spaces have been a great success for the social exchange of experiences, for the community meeting in recreational-sports activities, for recognition between neighbors, for the recovery of spaces or dead spots under bridges, for safe areas for the socialization of young people and adults. 19.5% qualify for regular leisure and recreation places, mainly the young university students of Copacabana, Caldas, La Estrella, and Girardota. Only 4.1% say that they do not have any in their localities.

In terms of satisfaction with the enjoyment of natural resources, 76.9% of young university students in their final semester said they were satisfied and very satisfied (see table 1); however, 18% of young university students, mainly in the municipalities of Medellin and Itagui, said they were moderately satisfied and very dissatisfied with the high level of pollution and the high level of vehicle traffic. This makes it almost mandatory for local governments to look for new administrative agreement points for environment control in the 10 municipalities, both in terms of territorial planning and the registration of new vehicles, the construction of new roads, and the use of public roads for mobility.

The city of Medellin began in 2019 designing linear green parks in the center of the city as part of the public transportation stations, that have a stock of 65 electric vehicles and 150 kilometers of bicycle routes throughout the Aburra Valley.⁸ There were made investments to meet the mobility needs of more than 71,000 users, with the construction of 100 bicycle stations and the extension of pedestrian routes. Thus, public spaces reduce pollution and improve the environment with public health benefits. Likewise, approximately 1,000 users of electric skateboards now roll along the cycle routes.⁹

It should be noted that the levels of satisfaction of young university students with the resources and public spaces for leisure and recreation are equally high. This reaffirms the effort made by the Metropolitan Area in its investments financed with 0.2% of the property tax rate for the valorization of the urban jurisdiction and the proceeds from fines, permits, licenses, and collection of environmental fees that go from 0.15% to 0.25%. Also, the municipalities of the metropolitan area invest their own money in environmental resources and public spaces for local recreation and leisure.

Satisfaction with the urban mobility equipment: roads and pedestrian pavements

Table 2 states that 52.5% of young university students rate the quality of traffic control in the Aburra Valley as good, that is the half. This means that the other half qualify the quality of traffic as regular and bad.

Table 2: Aburra Valley. Quality rating of mobility equipment

Quality of traffic			Paved roads			Signalling of routes		
Well	Regular	Bad	Well	Regular	Bad	Well	Regular	Bad
52.5%	32.5%	15.0%	70.0%	25.2%	4.8%	67.2%	25.7%	5.2%

Source: Centre for Regional Economic Studies CEER of SSPA and the research group Government, Territory and Culture of Antioquia (2018-2019)

According to studies carried out with the Secretaries of Mobility, the most frequent reason for dissatisfaction with the quality of transit services was the arbitrary nature of the sanctioning process and the corruption of the guards in some municipalities. The municipalities with the best evaluation of the quality of traffic services were in this order: Envigado, Sabaneta, La Estrella, Caldas y Medellin.

The second main reason for dissatisfaction with the quality of road control is vehicle saturation, mainly of motorbikes. According to the Secretariat of Mobility, by October 1, 2019 there were 900,000 registered motorbikes in Medellin. The third reason, according to the focal interviews carried out in the Secretariat of Citizenship and Mobility Forum of FundaPeaton is the disorder in the parking of vehicles in the outskirts.

Medellin, Itagui, Girardota, Barbosa, and Bello are the cities in the metropolitan area with the most vehicles parked on public roads, both in downtown and suburbia. They are also the municipalities with the most traffic jams, the highest number of traffic accidents. The cities of Medellin and Bello are the locations with the most reports of

⁸ Medellin, the Aburra Center has almost 115 kilometers in cycle routes, the Aburra South has 18.7 kilometers and the Aburra North has 13.7 kilometers and for all of Antioquia more than 500 kilometers. See the newspaper El Colombiano (30/12/2017) available on the website: <https://www.elcolombiano.com/antioquia/ciclorrutas-la-apuesta-en-el-sur-del-valle-de-aburra-EM7943413> and the report of the (11/02/2020) where an analysis of the best and worst cycle routes in the city of Medellin is made: <https://www.elcolombiano.com/antioquia/cuales-son-las-mejores-y-las-peores-ciclorrutas-de-medellin-ME12439647>

⁹ For a better reference on road growth in the Aburra Valley, see the interview with Eugenio Prieto in the newspaper El Mundo (20/02/2019) available on the website: <https://www.elmundo.com/noticia/El-valle-de-Aburra-expande-EnCicla-y-las-ciclo-rutas/375812>

fatal pedestrian accidents, according to reports delivered by FundaPeaton in 2018 and 2019.¹⁰ Hence, 32.5% of young university students in the metropolitan area say that the quality of traffic control is moderate; 11.6% say it is poor, and 3.4% say it is non-existent, in other words young university students are not satisfied with the quality of traffic control (see table 2).

Similarly, some students claim that the traffic speed control cameras do not achieve the expected objective due to the large number of vehicles that jam the available road structure of the metropolitan area and do not allow speeding. The photo fines generate profits for the businessmen who own the cameras and for the municipal governments, but they do not help in the solution of the regions' vehicle problem. Fatalities continue to rise.

As for the quality of the paved roads in the Aburra Valley as a whole, 70% of the young university students in the last semester say that they are good, 25.2% say that they are moderate, 3.8% say that they are bad and 1% say that they do not exist, that is, 4.8% of the roads are in poor condition. About signposting on roads to facilitate mobility, help to reduce accidents, assist in the right circulation of vehicles and the mobility of pedestrians; 67.2% of the students surveyed say they are good, 25.7% say they are regular and 5.2% say they are bad and 1.9% say they are non-existent (see table 2)

In other words, the neighborhoods and downtown areas of the Aburra Valley metropolitan area have good roads and are well signposted. More than 90% of the inhabitants of those areas say they are very satisfied with the quality of the water, sewerage, gas network, sanitation, and public transport services -METRO, Escalators, Metro Cables, Commercial Lines, Metro Plus, and Integrated Electric Bus Service- (Muñoz Cardona, 2019a).

Table 3: Aburra Valley. Quality rating of pedestrian pavements

Sports scenarios				Pedestrian walkways			
Well	Regular	Bad	Doesn't have	Well	Regular	Bad	Doesn't have
81.3%	16.2%	1.8%	0.7%	67.1%	29.1%	2.7%	1.1%

Source: Centre for Regional Economic Studies CEER of SSPA and the research group Government, Territory and Culture of Antioquia (2018-2019).

As for paved zones for the mobility of pedestrians and to facilitate safer mobility, 67.1% of university students in the last semester of the metropolitan area say that they are good, even signposted for blind people and people with reduced mobility; but 29.1% say that they are moderate because they lack space for pedestrians (see table 3). The main reason is that the informal economy has taken over public spaces (FundaPeaton, 2019). In other words, the road infrastructure in the metropolitan area is good, it meets social needs providing wide coverage, but not with quality, due to the lack of control over the use of public space.

As for the quality of the sports scenarios, 81.3% say they are good. The metropolitan area features an abundance of sports venues: excellent football, volleyball, and basketball courts. The vast majority of the football courts are made of synthetic grass, to maintain the health of the residents who live near these sports units. 16.2% say that they are moderate; 0.7% say they do not have any, and 1.8% say they are bad (see table 3). In other words, the metropolitan area has good and abundant sports venues.

Satisfaction with cultural spaces

As for the cultural scenarios that serve good professional and citizen training, insofar as they help to generate citizenship respectful of others and the other, 66.4% of young students in their final university semester state that the metropolitan area has good libraries, mainly in Medellín, Caldas, Envigado, Sabaneta, and Itagüí. The 22.9% say that they are regular, mainly students from Barbosa and Bello; 4.5% that they are bad, especially students from the municipalities of Girardota and Copacabana; others say that they not have, mainly students surveyed from the

¹⁰ See the newspaper El Colombiano (03/10/2019)<https://www.elcolombiano.com/antioquia/accidentes-de-motos-en-medellin-que-se-esta-haciendo-para-reducir-las-victimas-mortales-FP11695077>.

townships. In general, it could be concluded that the metropolitan area achieves good coverage at 89.3%, see table 4.

Table 4: Aburra Valley. Quality of the cultural spaces

Quality of libraries		Well	Regular	Bad	Doesn't have	Total	
Valle de Aburra		66.4%	22.9%	4.5%	6.2%	100.0%	
Teaters		Cultural Parks		Museums		Culture house	
Yes	NO	Yes	NO	Yes	NO	Yes	NO
61.6%	38.4%	83.0%	17.0%	62.9%	37.1%	71.4%	28.6%

Source: Centre for Regional Economic Studies CEER of SSPA and the research group Government, Territory and Culture of Antioquia (2018-2019).

As for the supply of cultural and recreational parks, the metropolitan area achieves an excellent coverage with CEDEZOS, UVAS, Andres Bello House, Debora Arango House and museum, Fernando Gonzales House, El Dorado, Arvi Park, Marco Fidel Suarez House, Fernando Gonzales House, Memory House, Explore Park, Theater houses and RUTAⁿ, among others. 83% of final semester students claim to enjoy such resources. 71.4% of university students surveyed say that municipalities in the metropolitan area have a Culture House. 61.6% say that they have theatres and 62.9% museums.

In other words, the metropolitan area has young people who are well trained, both in academics and in ethical sensitivity to others, who could help rebuild the social fabric by teaching the ethics of civic responsibility to respect public spaces. Companies and local governments could take advantage of the investment made by the 10 municipalities and the Metropolitan Area in city infrastructure, motivating social entrepreneurship and community leadership. This investment would help to reduce youth unemployment and would make room for new political and city cultures.

It is not irrelevant that more than 28% of students state that in their municipalities there are no Theatres and Museums as they are institutions promoting musical art, performing arts, and cultural education (see table 4). The municipalities with the least amount of equipment, according to students, are Girardota, Barbosa, and La Estrella.

Conclusions

The first conclusion is that the population surveyed is satisfied with the way that the Aburra Valley Metropolitan Area authorities have managed the city road and cultural facilities. The initiatives to recover public space have been successful, and have motivated a change in the attitudes of citizens towards care and respect for public goods. In this way, the construction of public spaces where the intellectual, cultural, and artistic activities may be integrated, is one of the formulas for success in the construction of cities for urban happiness.

However, mobility in the neighborhoods requires urgent attention. Due to poor traffic control, mobility problems have become one of the major triggers of violence and insecurity. Hence, the importance of pedestrian empowerment through the community leadership of young university students who live in and know the neighborhood. Vehicle insurance companies, driving schools, as well as Mobility and Citizenship Secretariats should be included in the design of training programs and public awareness for the use and respect for pedestrian paved areas, the importance of vehicle maintenance, and careful driving. Socialization training may be provided at the headquarters of Social and Community Organizations. It is also convenient an administrative strategy that in addition to empowering community leaders provides them with resources and awareness programs for local planning of public spaces.

Transit officers should know the city, learn to dialogue with the communities and know what they need their streets for. It would be helpful to complement the administrative model of control in the central areas of the city with the design of training programs in the neighborhoods: "*We are all pedestrians*", appealing to the creativity of the young university students who live in the town for the design of models of civic responsibility. If local transit

authorities work conjointly with suburban communities, they will be able to regain mobility and instill a road culture actually missing, in other words, “the downtown changes if the behavior of the people who visit it, changes. *And the people who visit it most live in the suburban settlements. In other words, if the periphery is organized, downtown will be organized. If the neighborhood is cultivated, downtown will be cultivated.*”

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The Socio-Economic Ramifications of the Covid-19 Pandemic: The Case of Ghana

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Abstract

The novel, dreaded, disruptive, and disastrous Covid-19 pandemic took the world by storm in January, 2020. The Covid-19 pandemic in Ghana is part of the worldwide coronavirus disease caused by “severe acute respiratory syndrome (SARS-CoV-2)”. On 12th January, 2020 the World Health Organisation (WHO) confirmed that the novel coronavirus was the cause of a respiratory illness that affected a cluster of people in Wuhan City, Hubei Province, China. This was reported to the WHO on 31st December, 2019. On 11th March, 2020, WHO declared the novel Covid-19 a global pandemic (Graphic Online, 2020a). It is worthy to note how the Government of Ghana, political parties, citizens, scientists and academia, corporate entities, faith based organisations, traditional rulers, have offered varied forms of interventions to combat the scourge. The Theoretical Framework of this research was underpinned by the Theory of Epidemics, the Agency Theory, the Rational Choice Theory, and the Stakeholder Theory. We conducted a cross-sectional research through non-probability and purposive sampling with 250 respondents. We also employed face-to-face interviews, structured closed-ended and open-ended Questionnaires (Braun and Clarke, 2012; Denzin, 2017), which were administered online through email application via Google Forms. One of our major findings was that with the approval of Pfizer/BioNTech Covid-19 vaccine by the UK's MHRA on 1st December, 2020 (Graphic Online, 2020b); and subsequently by the US FDA a week later on 8th December, 2020 (Graphic Online, 2020c), all governments around the globe in general, but Africa in particular, must make conscious efforts backed by adequate budgetary allocations to secure maximum quantities of the vaccines for their vulnerable teeming population.

Keywords: Covid-19 Pandemic, Coronavirus, Wuhan City, Hydroxychloroquine, Pfizer, BioNTech, MHRA, FDA, Theory of Epidemics, Agency Theory, Rational Choice Theory, Stakeholder Theory.

1. INTRODUCTION

The novel, dreaded, disruptive, and disastrous Covid-19 pandemic took the world by storm in January, 2020. The Covid-19 pandemic in Ghana is part of the worldwide pandemic of coronavirus disease 2019 caused by “severe acute respiratory syndrome (SARS-CoV-2)”. On 12th January, 2020 the World Health Organisation (WHO) confirmed that the novel coronavirus was the cause of a respiratory illness that affected a cluster of people in Wuhan City, Hubei Province, China. This was reported to the WHO on 31st December, 2019. On 11th March, 2020, WHO declared the novel Covid-19 a global pandemic (Graphic Online, 2020a).

Since COVID 19 sprung a surprise on the world after lingering on in China for the last quarter of 2019, nations have reacted differently in their response to this menace. It is worthy to note how the Government of Ghana, political parties, citizens, scientists and academia, corporate entities, faith-based organisations, traditional rulers, etc. have risen up to the occasion to be counted with varied forms of interventions to combat the scourge.

It is worth mentioning that, some of the public etiquette that Ghanaians acquired during the outbreak of Ebola between 2014 and 2016 (May and Anderson, 1987) has lingered on, although Ghana never registered a single case during that epidemic. However, the use of alcohol-based hand sanitizers and gloves in particular had become commonplace in most public places and airports in Ghana as a direct consequence of Ebola.

On the 4th of March 2020, the President of Ghana visited the Kotoka International Airport and isolation and treatment centers of the Tema General Hospital and the Greater Accra Regional Hospital to inspect their readiness in response to COVID 19. He stated that there were designated isolation and treatment centres in all the 16 regions of the Country. On the 6th of March, 2020, while giving the 63rd Independence Anniversary Speech (Graphic Online, 2020d), the President admonished the populace on the need for handwashing with soap under running water, the use of alcohol-based hand sanitizers, and avoidance of unnecessary contact (social distancing). On that occasion, the president instructively and conspicuously did not shake hands with dignitaries (an act which is atypical of such celebrations).

As has already been stated, the novel, dreaded, disruptive, and disastrous Covid-19 pandemic took the world by storm in January, 2020. The Covid-19 pandemic in Ghana is part of the worldwide pandemic of coronavirus disease 2019 caused by “severe acute respiratory syndrome (SARS-CoV-2)”. On 12th January, 2020 the World Health Organisation (WHO) confirmed that the novel coronavirus was the cause of a respiratory illness that affected a cluster of people in Wuhan City, Hubei Province, China. This was reported to the WHO on 31st December, 2019. On 11th March, 2020, WHO declared the novel Covid-19 a global pandemic?

On that same day, 11 March, 2020 the President of Ghana Nana Akufo-Addo directed the Minister of Finance, Ken Ofori-Atta, to make the cedi equivalent of US\$100 million available to enhance Ghana's coronavirus preparedness and response plan (Starrfmonlie, 2020). The President, later in the evening, delivered his “First Covid-19 Pandemic State of the Nation Address”. On 12 March, the Health Minister, Kwaku Agyemang-Manu, announced Ghana's first two cases at an emergency press briefing in Accra (www.ghanaweb.com). The two confirmed positive cases were people who returned to the country from Norway and Turkey, “making them imported cases of COVID-19 in Ghana”. These two cases begun the first contact tracing process in Ghana. Of the first two cases reported in Ghana, one case was a senior officer at the Norwegian Embassy in Ghana (Anyorigya, 2020) who had returned from Norway, while the other was a staff member at the United Nations (UN) offices in Ghana (Graphic Online, 2020) who had returned from Turkey (Graphic Online, 2020a). The Speaker of Parliament instructed MPs to have their temperature be tested before entering the Chamber (www.ghanaweb.com)

On 15 March, 2020, President Akufo-Addo banned all public gatherings including conferences, workshops, funerals, festivals, political rallies, church activities, and other related events to reduce the spread of COVID-19 at a press briefing on the state of COVID-19. Basic schools, senior high schools and universities (both public and private), were also closed. Only BECE and WASSCE candidates were permitted to remain in school and were to observe social distancing protocols. On the 21st of March, the President announced the first Covid-19 death from Kumasi (GhanaWeb, 2020c).

On that same day, all air, land and sea borders were closed to human traffic (Graphic Online, 2020e), for a fortnight from the midnight of Sunday, the 22nd of March, 2020. In a State of the Nation Address on the 27th of March, 2020, the three main cities of Accra, Tema and Kasoa, and the Kumasi Metropolis and its environs were placed under a “partial lockdown” effective Monday, 30th March, 2020 (Graphic Online, 2020f). All beaches were closed, and all markets in Accra were disinfected. All of the country's borders were later closed for two weeks from midnight of Sunday 22 March 2020. Passport services were also suspended.

Members of the Executive, Legislature, and the Judiciary, plus all the Security Services, some of the essential services like water, electricity, the telecom companies, the banking sector, and those involved in the production, distribution, and marketing of food, beverages, pharmaceuticals, medicines, paper and plastic packages were exempted from the restrictions. In addition, a Special Life Insurance Group Cover for frontline health professionals to the tune of GHC350,000 per head was announced by the President. Again, all Ghana Health Service Staff on Study Leave were recalled for the Covid-19 fight (Graphic Online, 2020g). The confirmed cases at the end of the very first month (March, 2020) of the emergence of Covid-19 in Ghana came to 161.

Although the Covid-19 pandemic is in its embryonic stages, this research was conducted to fill the academic gap by examining the global ramifications of the disease with regard to its rate of infection, mode of transmission, mortality rate, and its disastrous and disruptive consequences, with particular reference to the socio-economic life of Ghanaians between 12th March, 2020 when the first positive case was reported and 15th December, 2020.

The primary objectives of the study were:

- To ascertain the rate of infection of the Covid-19 pandemic in Ghana;
- To follow on the spread, and the mode of transmission of the disease in Ghana;
- To examine the various protocols put in place to minimise the spread of the pandemic;
- To identify the Ghanaian response, emergency expenditures, and stimulus packages;
- To assess the socio-economic impact of the disease in Ghana.

The rest of the paper is presented sequentially according to literature review, with particular reference to the conceptual and theoretical framework, empirical evidence, methodology, discussion of result and major findings, conclusion and recommendations.

2. THEORETICAL FRAMEWORK

2.1. The Theory of Epidemics

Epidemics that strike without warning, killing and incapacitating people indiscriminately, are dramatic and terrifying natural phenomena, equalled only by floods, earthquakes, and fires in the devastation they can cause, and often exceeding them in the horror and fear they evoke. Ancient priests and physicians seized on any supernatural or natural explanations for such epidemics. According to McKendrick (1926), they blamed the wrath of a vengeful god, evil spirits, or a convenient scapegoat (witches, demons, and passing strangers).

By the time of the Renaissance in the late 19th Century, people were blaming the climate and the weather for causing epidemics, with or without the conjunction of astrological signs. The miasma theory of disease was then concordant with this view. The birth of bacteriology, the discovery of infectious pathogens, and the ascendancy of the germ theory of disease led to more rational analysis of the observed facts, and the development of more logical explanations. From the “Public Health” perspective, it is as important to discover what leads to the decline and disappearance of epidemics as to understand why and how they begin and continue (Kermack and McKendrick, 1932).

William Farr (1807-1883) was the first to discern mathematical principles governing the behaviour of epidemics. William Hamer, Ronald Ross, and other “Public Health Specialists” in the early twentieth century (McKendrick, 1926) developed refined mathematical models, factoring into their equations the variables involved in determining the interactions of disease agents, human hosts, and environmental conditions. Ross’s models showed the interaction of mosquitoes, malaria parasites, and humans under varying conditions. Hammer modelled common infectious fevers of childhood.

According to Bailey (1975), “Epidemics Theory” considers three variables: agent, host, and environment. Epidemic Theory has been verified by empirical observations, and by experimental epidemiology, in which infectious pathogens are introduced into colonies of mice or rats, and the effects (disease and death outcomes)

observed. The spread of a contagious disease involves the interaction of two populations: the susceptible and the infective. In some diseases, these two populations are from different species.

For example, malaria is not passed directly between animals, but by anopheles mosquitoes; and schistosomiasis is passed from one animal to the other only through contact with water harbouring snails that can incubate the disease-causing helminths. In other diseases (May and Anderson, 1987), the infection can be passed directly from infectives to susceptibles. Viral diseases like chickenpox, measles, and influenza; and bacterial diseases like tuberculosis can pass through a population much as fire spreads through a grassland in a hot harmattan. The Covid-19 pandemic is in this category.

There are useful analogies between epidemics and chemical reactions. A Theory of Epidemics was derived by W. O. Kermack (a chemist), and A. G. McKendrick (a physician), who worked at the Royal College of Surgeons, in Edinburgh between 1900 and 1930. They introduced and used many novel mathematical ideas in studies of populations. One important result of theirs is that an infection determines a threshold size for the susceptible population, above which an epidemic will propagate. Their theoretical epidemic threshold is observed in practice, and it measures the extent to which a real population is vulnerable to the spread of an epidemic. At roughly the same time, V. I. Semenov derived a theory of combustion that identified explosion limits beyond which combinations of pressure and temperature cause chemicals to begin explosive chain-branched reactions. The two calculations are quite similar.

2.2. Agency Theory

The first scholars to propose, explicitly, that a theory of agency be created, and to actually begin its creation, were Stephen Ross (1973) and Barry Mitnick (1973), working independently and roughly concurrently. Ross is responsible for the origin of the economic theory of agency, and Mitnick for the institutional theory of agency, though the basic concepts underlying these approaches are similar. According to Ross and Mitnick, "Agency theory" examines the relationship between the agents and principals in the business. In an agency relationship, two parties exist (the agent and principal), whereby the former acts and takes decisions on behalf of the latter. The theory revolves around the relationship between the two, and the issues that may surface due to their different risk perspectives and business goals. In finance, the most talked about agency relationship exists between shareholders and executives of a corporation where the top brass is elected to act in the interest of the true owners of the company.

Agency theory suggests that the firm can be viewed as a nexus of contracts (loosely defined) between resource holders. An agency relationship arises whenever one or more individuals, called principals, hire one or more other individuals, called agents, to perform some service and then delegate decision-making authority to the agents. The primary agency relationships in business are those (1) between stockholders and managers and (2) between debt-holders and stockholders. These relationships are not necessarily harmonious; indeed, agency theory is concerned with so-called agency conflicts, or conflicts of interest between agents and principals.

According to Mitnick (1993), one of the most common examples of agency theory can be seen in the way a government of a country functions. The masses elect political representatives to run the country in a way that maximizes their interests. Representatives of different political parties promise the voters to bring changes in the governing model of the country. However, the electorates of almost all sovereigns find themselves cheated when their elected candidates act in an unscrupulous manner after assuming office. Here, the voters act as principals who elect the government representatives to act as their agents.

In the view of (Shapiro, 2005), there are two situations which make efforts on resolving agency conflicts all the more important. One of the major reasons for such strife is the levels of risk appetite each is willing to undertake. Shareholders are mostly not involved in the day-to-day working of the company and hence are not fully equipped to understand the rationale behind critical business decisions. On the contrary, managers are more far-sighted and have a far greater risk appetite due to their close access to the relevant information. They believe in the going concern concept of accounting and most of their decisions are taken keeping the long-term view of the company

in mind. While the shareholders are keen to increase the current and future value of their holdings, the executives are more interested in the long-term growth of the company. Thus, the differences in their approach create a feeling of distrust and disharmony.

In a nutshell, there is a problem of goal congruence between the two parties. The corporate governance policies, which aim at aligning the objectives of both the principal and agents, are likely to resolve most agency conflicts. As we know that there are no free lunches in this world, there are some agency costs also.

2.3. Rational Choice Theory

Rational choice theory, also known as “theory of rational choice”, “choice theory” or “rational action theory”, is a framework for understanding and often formally modeling social and economic behaviour (Bell, 1981; Pierre Bourdieu, 2005). The basic premise of rational choice theory is that aggregate social behaviour results from the behaviour of individual actors, each of whom is making their individual decisions. The theory also focuses on the determinants of the individual choices (methodological individualism). Rational choice theory then assumes that an individual has preferences among the available choice alternatives that allow them to state which option they prefer (Nell and Errouaki, 2011). These preferences are assumed to be complete (the person can always say which of two alternatives they consider preferable; or that neither is preferred to the other) and transitive (if option A is preferred over option B; and option B is preferred over option C; then option A is preferred over option C).

According to Kahneman and Tversky (1979), the rational agent is assumed to take account of available information, probabilities of events, and potential costs and benefits in determining preferences, and to act consistently in choosing the self-determined best choice of action. In simpler terms, this theory dictates that every person, even when carrying out the most mundane of tasks, performs their own personal cost and benefit analysis in order to determine whether the action is worth pursuing for the best possible outcome. And following this, a person will choose the optimum venture in every case. This could culminate in a student deciding on whether to attend a lecture or stay in bed, a shopper deciding to provide their own bag to avoid the five cedis (GHC5.00) charge, or even a voter deciding which candidate or party to choose from (based on who will fulfill their needs the best way).

In the opinion of Frank (1990), a particular version of rationality is “instrumental rationality”, which involves seeking the most cost-effective means to achieve a specific goal without reflecting on the worthiness of that goal. Rational choice theorists do not claim that the theory describes the choice “*process*”, but rather that it predicts the “*outcome*” and “*pattern*” of choices. An assumption often added to the rational choice paradigm is that individual preferences are self-centered, in which case the individual can be referred to as a “*homo economicus*”. Such an individual acts *as if* they are balancing costs against benefits to arrive at an action that maximizes personal advantage.

According to Coleman (1990), without specifying the individual's goal or preferences, it may not be possible to empirically test, or falsify, the rationality assumption. However, the predictions made by a specific version of the theory are testable. In recent years, the most prevalent version of rational choice theory, “*Expected Utility Theory*”, has been challenged by the experimental results of behavioral economics. Economists are learning from other fields, such as psychology, and are enriching their theories of choice in order to get a more accurate view of human decision-making. For example, the behavioral economist and experimental psychologist Daniel Kahneman won the Nobel Memorial Prize in Economic Sciences in 2002 for his work in this field. According to James Coleman (1990), the rational choice theory has become increasingly employed in social sciences other than economics, such as sociology, evolutionary theory, and political science in recent decades. It has had far-reaching impacts on the study of political science, especially in fields like the study of interest groups, elections, behaviour in legislatures, coalitions, and bureaucracy. In these fields, the use of the rational choice paradigm to explain broad social phenomena is the subject of controversy.

Early neoclassical economists writing about rational choice, including William Stanley Jevons (1835-1882), assumed that agents make consumption choices so as to maximize their happiness, or utility. Contemporary theory

bases rational choice on a set of choice axioms that need to be satisfied, and typically does not specify where the goal (preferences, desires) comes from. It mandates just a consistent ranking of the alternatives. Individuals choose the best action according to their personal preferences and the constraints facing them. For instance, there is nothing irrational in preferring fish to meat the first time, but there is something irrational in preferring fish to meat in one instant and preferring meat to fish in another, without anything else having changed.

The theory applies to more general settings than those identified by costs and benefits. In general, rational decision making entails choosing among all available alternatives the alternative that the individual most prefers. The "alternatives" can be a set of actions ("what to do?") or a set of objects ("what to choose/buy"). In the case of actions, what the individual really cares about are the outcomes that result from each possible action. Actions, in this case, are only an instrument for obtaining a particular outcome (Elster, 1989).

According to Anand (1993), the theory makes two technical assumptions about individuals' preferences over alternatives:

- *Completeness* – for any two alternatives A and B in the set, either A is preferred to B, or B is preferred to A, or the individual is indifferent between A and B. In other words, *all* pairs of alternatives can be compared with each other.
- *Transitivity* – if alternative A is preferred to B, and alternative B is preferred to C, then A is preferred to C.

Together, these two assumptions imply that given a set of exhaustive and exclusive actions to choose from, an individual can *rank* the elements of this set in terms of his preferences in an internally consistent way (the ranking constitutes a *partial ordering*), and the set has at least one maximal element.

The preference between two alternatives can be:

- *Strict preference*, occurs when an individual prefers A to B and does *not* view them as equally preferred.
- *Weak preference*, implies that an individual either strictly prefers A over B, or is indifferent between them.
- *Indifference*, occurs when an individual neither prefers A to B, nor B to A. Since (by completeness) the individual does not *refuse* a comparison, they must therefore be indifferent in this case.

Additional assumptions include:

- *Perfect information*: The simple rational choice model above assumes that the individual has full or perfect information about the alternatives, i.e., the ranking between two alternatives involves no uncertainty.
- *Choice under uncertainty*: In a richer model that involves uncertainty about the how choices (actions) lead to eventual outcomes, the individual effectively chooses between lotteries, where each lottery induces a different probability distribution over outcomes. The additional assumption of independence of irrelevant alternatives then leads to "expected utility theory".
- *Intertemporal choice*: when decisions affect choices (such as consumption) at different points in time, the standard method for evaluating alternatives across time involves discounting future payoffs.
- *Limited cognitive ability*: identifying and weighing each alternative against every other may take time, effort, and mental capacity. Recognising the cost that these impose, or cognitive limitations of individuals, gives rise to "theories of bounded rationality".

According to Bicchieri (1993), the relationship between the rational choice theory and politics takes many forms, whether that be in voter behaviour, the actions of world leaders, or even the way that important matters are dealt with. Voter behaviour shifts significantly thanks to rational theory, which is ingrained in human nature, the most significant of which occurs when there are times of economic trouble. This was assessed in detail by the American Political Economist, Anthony Downs (1957) who concluded that voters were acting on thoughts of higher income as a person 'votes for whatever party he believed would provide him with the highest utility income from

government action. This is a significant simplification of how the theory influences people's thoughts, but makes up a core part of rational theory as a whole.

In a more complex fashion, voters will react often radically in times of real economic strife, which can lead to an increase in extremism. The government will be made responsible by the voters and thus they see a need to make a change. Some of the most infamous extremist parties came to power on the back of economic recessions, the most significant being the far-right Nazi Party in Germany, who used the hyperinflation at the time to gain power rapidly, as they promised a solution and a scapegoat for the blame. The fear for many is that rational thinking does not allow for an efficient resolution to some of the most troubling world problems, such as the climate crisis, and the novel, dreaded, disastrous, and disruptive Covid-19 pandemic. In this way, nationalism will not allow countries to work together and thus the criticisms of the theory should be noted very carefully.

2.4. The Stakeholder Theory

The first person to define stakeholder theory was organizational theorist Ian Mitroff in his book *Stakeholders of the Organizational Mind*, which came out in 1983. Shortly thereafter, an article about stakeholder theory was released in 1983 in the *California Management Review* by philosopher and professor of business administration R. Edward Freeman. Freeman did not cite Mitroff as a source; rather he attributed his stakeholder theory to discussions at the Stanford Research Institute. He went on to publish his book, *Strategic Management: A Stakeholder Approach*, shortly after the article. In Freeman's book, he identified and modelled stakeholder groups within a corporation, describing and recommending ways to manage their interests and determine who really counts from the perspective of the company.

The Stakeholder Theory, is a theory of organizational management and business ethics that accounts for multiple constituencies impacted by business entities such as employees, suppliers, customers, local communities, and others. The theory addresses morals and values in managing an organization, such as those related to corporate social responsibility, market economy, and social contract theory (Hill and Jones, 2012; Howlet and Ramesh, 2003).

Stakeholder theory is a view of capitalism that stresses the interconnected relationships between an organization and its customers, suppliers, employees, investors, communities and others who have a stake in the organization. The theory argues that a firm should create value for "all stakeholders", not just its "shareholders (Freeman, 1984)"

The theory of the Stakeholder has fundamentally become a basis of knowledge for businesses (and by extension, countries), to secure their relationship with their stakeholders through a corporate social responsibility, and a social contract. Free, fair, and transparent multi-party democratic elections at periodic intervals is considered as a strategic approach by which countries denote stakeholders' participation and reduces information asymmetry (Hobbes, 1985; Quentin, 1978). It has been recognized that organizations taking into account stakeholders' requirements tend to show better performance than those that do not.

The "Stakeholder Theory" was assumed to be a bulwark against the unbridled corruption-craze by public officials against the state. But the stakeholder theory notes that there are several interested parties that must be included under the umbrella of stakeholder, such as the company's employees, customers, suppliers, financiers, communities, governmental bodies, political groups, trade associations, trade unions and even competitors, as they too can impact the company. The list of who the stakeholders are is not universally agreed upon, and even the definition of a stakeholder remains contested by some (Suchman, 1995). Even the academic literature is in conflict. There are many books and articles on the subject and most cite Freeman as its father (Lindblom and Woodhouse, 1993).

Freeman says he stood on the shoulders of giants, such as building from research in strategic management, corporate planning, systems theory, organization theory and corporate social responsibility (Hill and Jones, 2012). More recently, in 1995, ethicist Thomas Donaldson has argued that stakeholder theory has descriptive, instrumental and normative aspects that are mutually supportive. Stakeholder theory posits that a company is only successful when it delivers value to its stakeholders, and those values can come in many forms beyond financial

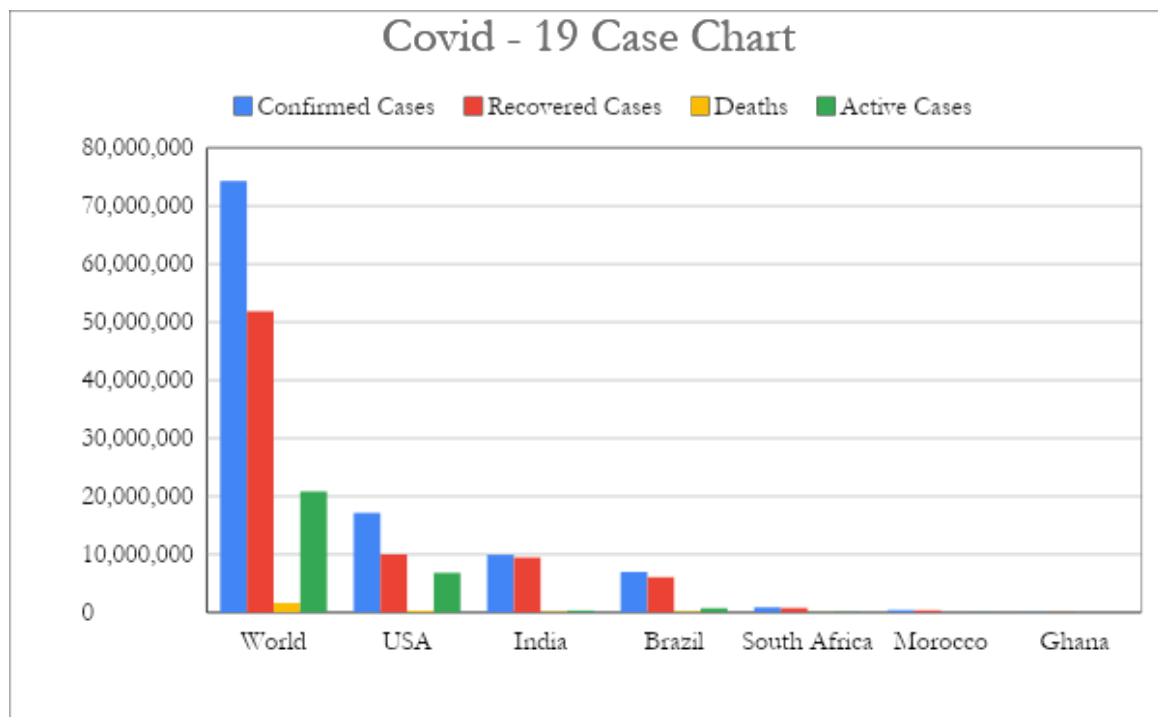
benefits. One of the values produced by stakeholder theory includes greater productivity across the organization. Stakeholder theory drives more than profits and productivity. There are ethical benefits of practicing it as well.

Some critics say the stakeholder theory is problematic because the interests of various stakeholders cannot be balanced against each other. This is because stakeholders represent such a large and diverse group. According to Quentin (1978), you cannot please every stakeholder. One or more stakeholders will have to take a backseat to other, more dominant ones, which is likely to create discord. This will disrupt the benefits associated with stakeholder theory. Also, who will wield the most influence? Some stakeholders might find that they are not impacting decisions as much as another group. The different power levels and spheres of influence can be a problem. Even those with seemingly more influence might not feel that they are getting what they want.

2.5. THE EMPIRICAL EVIDENCE

2.5.1. Covid-19 Case Count as at 16th December, 2020

	Confirmed Cases	Recovered Cases	Deaths	Active Cases
World	74,310,697	51,836,162	1,642,083	20,832,452
USA	17,143,942	10,007,956	311,073	6,824,913
India	9,932,908	9,456,449	144,130	332,329
Brazil	6,974,258	6,067,862	182,854	723,542
South Africa	873,679	764,977	23,661	85,041
Morocco	403,619	362,911	6,711	33,997
Ghana	53,270	51,965	327	978



2.5.1. Global Ramifications due to the Covid-19 Pandemic

The aviation industry came to a screeching halt because of the impossibility of social distancing in the “belly of an iron bird”, and border closures and lockdowns. With air, land, and sea borders closed, the tourism industry came crashing down. Most hospitality venues have closed their doors, musicians have cancelled their shows, and filmmakers have stopped production. The entertainment industry globally has not been spared; movie releases have been pushed back, concerts have been cancelled, TV shows have stopped filming, theatres have been shut (among others), putting many people out of jobs.

Global, national, and local football and all sporting activities have come to an end as a direct result of Covid-19. The scale of the rail and road transport services were curtailed as a result of social distancing. Religious tourism and church services were all curtailed. The industry for personalised services such as hairdressers, beauticians, barbers. The educational sector suffered the most, although some educational institutions intensified their presence and activities online. Auditing and accounting firms were not spared the devastating effects of Covid-19 pandemic. Notwithstanding the devastating, disastrous, and disruptive consequences, the pharmaceutical industry, the energy industry, and the utility industries (water, electricity, telecoms etc) experienced an upsurge in the scale of their operations.

2.5.2. Stimulus Packages

A “stimulus package” is a package of economic measures put together by a government to stimulate a floundering economy. The objective of a stimulus package is to invigorate the economy and prevent or revert a recession by boosting employment and spending. The theory behind the usefulness of a stimulus package is rooted in Keynesian economics (Keynes, 1936), which argues that recessions are not self-correcting, and therefore government intervention can ameliorate the impact of a recession. This happens because increased government spending makes up for the decreased private spending, thereby boosting overall aggregate demand to close the output gap in the economy. The US Senate voted to approve a \$2 trillion stimulus bill on March 25th, 2020, to backstop the economy from the economic impact of the Covid-19 pandemic. President Donald Trump signed the CARES Act into law on 27th March, 2020.

2.5.3. Covid-19 Vaccines

Pfizer/BioNTech announced on November 9, 2020 that its Covid-19 vaccine has been found to be more than 95% effective in its recently concluded large scale trial (BBC News, 2020a; CNN, 2020a). The two key scientists who developed this vaccine are Turkish-born Muslims named Dr Ugur Sahin and his wife Dr Ozlem Tureci. The couple started “BioNTech”, a technology startup based in Germany, to develop treatments using “messenger RNA technology”. Dr Ugur Sahin, 55 and his wife, Dr Ozlem Tureci, 53 are both Turkish-Muslim immigrants in Germany, who had been working on the “mRNA technology” for more than 25 years. BioNTech was already working with the Pfizer Pharmaceutical company of Germany to develop a “new flu vaccine” when Covid-19 emerged in China.

Vaccines work by mimicking disease agents and stimulating the immune system to build up defences against them. On 8th December, 2020, a UK grandmother became the first person in the world to be given the “Pfizer Covid-19 Jab” as part of a mass vaccination programme. Margaret Keenan, who turns 91 years next week, said the “injection she received (the first of two doses) at 06:31 GMT was her best early birthday present”. It was the first of 800,000 doses of the Pfizer/BioNtech vaccine that will be dispensed in the coming weeks. Up to 4 million more doses (out of a total of 40 million), are expected at the end of December, 2020. Health hubs in the UK intend to vaccinate those who are 80 years and above, and some healthcare staff. The aim of the programme is to protect the most vulnerable in the society, and to return life to normalcy (BBC News, 2020b).

The UK’s health regulatory body, MHRA, approved the Pfizer vaccine on the 1st of December, 2020. The US FDA gave its approval on the 8th of December, 2020. The “Pfizer BioNTech vaccine must be stored at a temperature of -07C”, and the US has ordered more than 600 million doses of the vaccine. Two other major vaccines in the pipeline are “Moderna’s mRNA, and Oxford University/AstraZeneca vaccines (CCN, 2020b).

Egypt has also ordered about 10 million doses. Despite its huge trial successes in Europe and the US, huge challenges still remain with the Pfizer/BioNTech vaccine with regards to the alarm being raised about its equitable access, logistics, distribution, and, perhaps most significantly, cost.

3. METHODOLOGY

We conducted a cross-sectional research through non-probability and purposive sampling with 250 respondents. We also employed face-to-face interviews, structured closed-ended and open-ended Questionnaires which were administered online through email application via Google Forms (as a result of the novel, dreaded, and disruptive Covid-19 pandemic). The study also examined relevant literature, including published articles, books, annual reports and other internal company documents. In analyzing and presenting the data from the interviews and the secondary reports, we employed a qualitative research methodology using a thematic content analysis. Thematic analysis is a method used for systematically identifying, organizing and offering insight into patterns of meaning (themes) across a dataset (Braun and Clarke, 2012). This method is mostly recommended for working with qualitative data as it enables a researcher to actively enter the worlds of native people and render those worlds understandable from the standpoint of a theory that is grounded in the behaviour, languages, definitions, attitudes and feelings of those studied (Denzin, 2017).

4. RESULTS OF FINDINGS AND DISCUSSION

4.1. Formation of the National Covid-18 Team

The National COVID 19 Team includes, the Presidential adviser on health who is an experienced medic and former Director of Health Services (Dr. Nsiah Asare), Dr. Anarfi Asamoah-Baah a former Deputy Director-General of WHO directly appointed to coordinate issues to do with COVID 19 at the Presidency; as well as the newly appointed Deputy Minister of Health (Dr Okoe-Boye) with Medicine and Public Health background to replace one with Law and Finance background. Ghana has two equipped centres of excellence namely; the Noguchi Memorial Institute of Medical Research (NMIMR) in Accra and the Kumasi Centre for Collaborative Research (KCCR) in Kumasi responsible for testing samples from the Southern and Northern Sectors respectively.

Academics at the Kwame Nkrumah University of Science and Technology (KNUST) and other institutions have been producing alcohol-based hand sanitizers to supply the Ashanti Region and beyond since COVID 19 was reported in Ghana. The College of Engineering of KNUST has also designed and constructed a ventilator called 'IBV and KNUST Ventilators' which is awaiting clinical testing. In addition, Scientists at KNUST together with Incas Diagnostics (a diagnostic company), have created a Rapid Diagnostic Test (RDT) kit to help test for the novel coronavirus. The Centre for Plant Medicine Research (CPMR) serves at the point of authenticating and integration of herbal medicine claims into the COVID 19 management and treatment protocols.

The President in his address to the Nation on 5th April, 2020 indicated that the government was collaborating with the Ghana Academy of Arts and Sciences (GAAS) and the Council for Scientific and Industrial Research (CSIR) on how to harness well-researched indigenous and modern knowledge in the fight. He also praised a young man who had invented a solar-powered hand washing machine. The Ghana Standards Authority (GSA) has since waived off a certification fee of Twenty-Thousand Ghana Cedis (GHC20,000) and has seen to the expeditious certification of the sample for mass production as soon as practicable. Government is also supporting some local companies in the production of face masks, surgical gloves, scrubs and other PPEs. All locally manufactured products will undergo testing and certification by the Ghana Standards Authority and the Food and Drugs Authority.

4.2. Involvement of Science, Technology and Innovation

The Ghana Health Service (GHS) has been at the forefront of the battle and influencing government in decision making as far as the COVID 19 pandemic is concerned. This body is responsible for implementation of health-related national policies under the control of the Ministry of Health and together with the Ghana Medical Association have been involved in public education on COVID 19 prevention, testing and treatment. The

Telecommunication Companies in Ghana have been assisting the Ghana Health Service (GHS) with the necessary data for effective contact tracing. The Ghana Health Service (GHS) runs a real-time online monitoring system for COVID 19 in Ghana. It also advises the government on strategies for an effective contract tracing and management of COVID 19.

4.3. Sequencing of SARS-CoV-2

On the 11th of April, the University of Ghana released information on the successful sequencing of SARS-CoV-2 from fifteen confirmed cases in Ghana by scientists at their West African Centre for Cell Biology of Infectious Pathogens (WACCBIP) in collaboration with the Noguchi Research Institute of Medical (NMIMR) all in Accra.

4.4. Launching of Covid-19 Tracker App

On 13th April, 2020, the Vice President of Ghana launched the Ghana COVID 19 Tracker App. He said “It will help us easily track people with the virus, and those who have had contact with others. It is also useful in quarantine reliability, in case certain individuals need self-quarantine”. A couple of weeks prior to this, Prof. Ellis Owusu-Dabo, the Dean of School of the Allied Health and his team at the Kwame Nkrumah University of Science and Technology (KNUST) had developed a similar tracking app called Covid-19 TECHBOT. It goes without saying that the global shortage of PPEs and medical supplies has forced the country to look inward and harness resources and potential to design and produce locally what is needed for the COVID 19 battle.

4.5. Regular Presidential Addresses

On the 12th of March, 2020, a day after the World Health Organisation (WHO) declared COVID 19 a pandemic, the President of Ghana gave the first of what will become a regular feature in the COVID 19 response agenda to the entire nation. He presented the readiness of the Country and added that the Government of Ghana (GoG) had plans spending One Hundred Million Dollars (\$100 Million) on interventions such as expansion of infrastructure, procurement of Personal Protective Equipment (PPEs), materials and equipment, and public education among others. He advised the populace to avoid foreign travel as much as possible and gave the assurance that all points of entry including land borders and airports were ready to screen all incoming travellers.

On the 13th of March, 2020, the President addressed the nation once more to repeat an earlier report by the Minister of Health together with the Minister of Information on the first two confirmed cases of COVID 19. He re-echoed the need for all and sundry to adhere to the COVID19 social etiquette in order to prevent the spread. He emphasised that the COVID 19 fight is not only a government issue but required all stakeholders to get on board and cooperate with the government. So far, there have been such presidential addresses on the 15th March, 17th March, 21st March, 5th April and 9th April, 19th April 26th April, 10th May and 31st May, 2020. These addresses offer updates on confirmed cases as well as legislated directives.

4.6. Legislation

The President of Ghana has passed four Executive Instruments (Executive Instruments, 2020) to offer a legal backing to the directives issued in respect of the COVID-19 containment strategy made so far. They are; E.I.63 on ‘Establishment of Emergency Communications System-Instrument, 2020, gazetted on 23rd March, 2020; E.I. 64 on ‘Imposition of Restrictions (Coronavirus Disease (COVID-19) Pandemic) Instrument, 2020, gazetted on 23rd March, 2020; E.I.65 on ‘Imposition of Restrictions (Coronavirus Disease (COVID-19) Pandemic) (No.2) Instrument, 2020, gazetted on 30th March, 2020 and E.I. 66 on ‘Imposition of Restrictions (Coronavirus Disease (COVID-19) Pandemic) (No.3) Instrument, 2020, gazetted on 3rd April, 2020.

4.7. Directives on Restricted Movement

These have ranged from an initial directive on the indefinite closure of universities, schools, churches, mosques and a ban on all public gatherings on 15th March, 2020 to the imposition of a lockdown on the two epicentres namely the Greater Accra Metropolitan Area and the Greater Kumasi Metropolitan Area on the 27th of March, 2020. It is interesting to note that, the stance of the National Identification Authority (NIA) to continue its mass

registration exercise in the Eastern region after the President's ban on public gatherings was challenged in court by two individuals with the Ghana Medical Association threatening a strike. Though the court ruled in favour of the NIA, it decided to call off the registration exercise during this pandemic. On the 21st of March, 2020, the President of Ghana ordered the closure of all the country's borders (land, sea and air) to all human traffic and directed a 14 –day mandatory quarantine and testing for all travellers (Ghanaians or residents) from countries with more than 200 COVID 19 cases. At this time, Ghana had recorded nineteen (19) COVID 19 Cases. This was followed by a release on 23rd March, 2020, from the Ghana Tourism Authority ordering the closure of all beaches in the Country.

In solidarity with the Government's directive on social distancing, the Chairman of the Kwahu Traditional Council, Daasebre Akuamoah Agyapong II in a press release on the 26th of March, 2020, signed by the Registrar of the Council, directed all natives of Kwahu outside of the jurisdiction (either in Ghana or abroad) to remain wherever they are and not to attempt to move into the Traditional Area. He said "Kwahus living in Kwahu should remain in Kwahu. No travelling outside of Kwahu until the pandemic is contained."

These directives were given due to the culture of 'Easter Homecoming' among the Kwahu. He added that because Kwahu has a large aged population, any mingling with outsiders could expose the already vulnerable group. Though traditional rulers are recognised in Ghana, the legitimacy of the King's perceived order was interrogated by the public and the Traditional Council had to clarify that their press release was an advice.

4.8. Public Education and Stakeholder Engagement

The Government of Ghana (GoG) since the inception of COVID 19 in Ghana has interacted with faith based organisations, traditional rulers, market women, owners of public transport, pharmaceutical manufacturers and industries, leadership of parliament and others on how best they can partner government and use their various platforms to help in public education, expansion of infrastructure and local manufacture of Personal Protection Equipment (PPEs) and other materials needed. Education materials have been translated into eight (8) local languages for effective dissemination. The use of skits and recorded messages by social media influencers have enhanced the coverage.

There have been periodic press briefings led by the Minister of Information with the Media which serves as a channel for information flow and a feedback mechanism from the Government to the Populace and vice versa. Most of the Media outlets continue to offer free airtime and space for public education on COVID 19 and the response strategies. On the 4th of April, 2020 the President met with the leadership of political parties in opposition to discuss how they could collectively tackle the COVID 19 pandemic. Though the current public education strategy is all-embracing, the exigencies of life make adherence to the social etiquette nearly impossible for the underserved in society.

Reacting to conspiracy theories being spun around by a section of the media in this period of pandemic, the President at a meeting held on the 26th of April, 2020 with the leadership of the National Media Commission, journalists and media houses among others, admonished reporters to allow "the science to do the talking" and avoid the spread of fake news.

4.9. The National Covid-19 Trust Fund

The President of the Republic, Nana Addo Dankwa Akufo-Addo, on Sunday, 29th March, 2020, inaugurated the Board of Trustees of the COVID-19 National Trust Fund, at a brief ceremony at Jubilee House, the seat of the nation's Presidency. The Board of Trustees, which is chaired by former Chief Justice, Sophia Akuffo, will receive contributions and donations from the public to assist in the welfare of the needy and the vulnerable. The other members of the Board are Archbishop Justice Ofei Akrofi, Mr. Jude Kofi Bucknor, Gifty Afenyi-Dadzie, Mrs Elsie Addo-Awadzie, Dr. Ernest Ofori-Sarpong, Dr Tanko. Mr. Collins Asare will act as Secretary to the Board. As a critical Sector of the economy, the Ministry of Health seeks to improve the health status of all people living in Ghana thereby contributing to Government's vision of universal health coverage and a healthy population. Since

the detection of COVID 19 in Ghana, there have been countless cash and kind donations from individuals, churches, the private sector, the aviation industry, the political parties and various entities from all spheres of the country. Some of these donations were made directly to hospitals, research centres, prisoners, the destitute, etc. while others were made to the government.

4.10. Distribution of Food Items to the Vulnerable

The Ministry of Gender and Social Protection in collaboration with National Disaster Management Organisation (NADMO), Metropolitan, Municipal and District Chief Executives (MMDCEs) and Faith-based Organisations have been involved in the distribution of food and other supplies to the underprivileged within the Communities under lockdown. Though the experts had advised a total lockdown as the key to eradicating community spread in the two epicentres, the government was faced with the dilemma of the inconvenience it will have on the have-nots who have to live from hand-to-mouth and the economic implications of the stimulus packages thereof.

4.11. The Financial Sector and Stimulus Package

On the 16th, 18th and 22nd of March, 2020, the Bank of Ghana (BoG) and the Ghana Interbank Payment and Settlement Systems Ltd (GhIPSS) came up with measures such as ease of transaction and waiver or reduction of online transaction charges, to cushion the public who undertake online transactions as well as discourage the use of cash so as to prevent the spread of COVID 19. In addition, the BoG has reduced the monetary policy rate by 150 basis points to 14.5 percent as the central bank bids to stimulate the economy and shield the impact of COVID19. The Bank of Ghana has also provided a 1.5% decrease in the Policy Rate and 2% in reserve requirement with a Three Billion-Cedi (GHC3 billion) facility, to support industry especially in the pharmaceutical, hospitality, service and manufacturing sectors. There is also a 2% reduction in interest rate among others.

The President during his addresses to the nation on the 5th and 9th of April, also announced the provision of free water supply and 50% waiver on electricity consumption for residents from April-June 2020. Front line health workers have been offered a 50% increase in basic salary and a Life Insurance Cover of GHC350,000 per head in addition to all other stimuli which the public is enjoying. As a way of cushioning importers from losses due to the lockdown and its restrictions, the government waived rent charges and demurrages for the months of March and April. Taking a cue from the formation of the National fund, leaders in certain localities have also set up support funds to help the less privileged under their jurisdiction. Notable among them is the One Million Ghana-Cedi fund, set up by Otumfuo Osei Tutu II, King of the Ashanti Kingdom on 1st April, 2020.

The Ghana Revenue Authority has come up with flexible terms such as a 2-month extension of annual tax returns and field auditing and a waiver of penalties for taxpayers who redeem their outstanding debts by 30th June, 2020. The President in his address to the Nation on 27th March, 2020, mentioned that “Government, in collaboration with the National Board for Small Scale Industries (NBSSI), Business & Trade Associations and selected Commercial and Rural Banks, will roll out a soft loan scheme up to a total of Six Hundred Million Ghana Cedis (GH¢600 million), which will have a one-year moratorium and two-year repayment period for micro, small and medium scale businesses.” In recognition of the key role the media continues to play in Ghana’s COVID 19 response, the Government through the Deputy Minister for Information, donated PPEs to the media on the 5th of May, 2020.

4.12. Disinfection of Markets and Lorry Stations

The Minister of Local Government and Regional Development in response to the President’s order started disinfection of all open spaces, markets and lorry stations in the Country starting from the Greater Accra Metropolitan Area on 23rd March, 2020 as a precautionary measure against community transmission.

4.13. Amnesty to Prisoners

On the 26th of March, the President granted amnesty to eight hundred and eight (808) prisoners upon the recommendation of the Prison Service Council and in consultation with the Counsel of State in accordance with the Ghana Constitution. This was intended to ease overcrowding in the prisons as a response to COVID 19.

4.14. Expansion of Infrastructure for testing, treatment and management

Though the Noguchi Institute of Medical Research (NIMR) and the Kumasi Centre for Collaborative Research (KCCR) have been the designated institutions for testing COVID 19 from the onset, the increase in the demand for more testing as the days go by has resorted in the establishment of eight (8) additional testing faculties dotted across the Country to help the situation. Also in the quest to shorten the time between sample taking and testing in remote communities, “Zipline” Company which is in charge of medical drones in Ghana started transporting COVID 19 test samples from April, 2020 and this has eased the stress associated with waiting for many days before status is confirmed.

On the 17th of April, the President of Ghana did a virtual sod-cutting of a 100- bed isolation and treatment facility in the Ga East Municipality. A number of centers have also been secured around the country with the private sector and faith-based organizations championing the cause in some instances. It is gratifying to note that the COVID 19 pandemic and its challenges have driven the government to pay more attention to the health sector. This was admitted by the President in his address on the 26th of April, 2020, where he announced plans to start the construction of eighty-eight (88) new district hospitals to be completed within a year. He added that regional hospitals were also to be constructed in the six (6) newly created regions of the country. On 24th July, 2020, the Vice President commissioned a 100-bed Infectious Disease and Treatment Centre.

4.15. Gradual Ease of Restrictions

The President on 19th April, 2020, during his address to the nation, lifted the lockdown imposed on the Greater Accra and Greater Kumasi Metropolitan areas and encouraged the wearing of face masks in all public places. At this point the COVID 19 statistics was; 641 positive cases out of 50,719 persons tested. Categories under the 641 confirmed cases are; 548 mild/responding to treatment, 83 recovered, 2 critical/moderately ill and 8 deaths. Though the numbers had increased significantly since the last update, the government indicated that the timing was good since an aggressive contact tracing had been done and all residents at risk had had their samples taken, though some samples were yet to be tested. The President added that his decision was based on science and data. The news was received with mixed reactions with some asserting it was premature and others hoping that was the best for the economy. Though the lockdown was lifted, other restrictions remained in place.

On the 26th of April, 2020, the President of Ghana during his address to the nation re-iterated the order of compulsory wearing of masks in public places. The days that followed saw the police inspecting masks and asking residents who were seen in public without masks to go home. The Minister of Aviation on the 29th of April, issued a statement that domestic flights which were grounded during the period of the lockdown would resume operations from the 1st of May, 2020. He assured the general public that the airports are safe after a thorough disinfection exercise.

Though the number of COVID 19 cases in Ghana keeps increasing due to enhanced testing, the President of Ghana during his 10th Update to the nation on the 31st of May, 2020, lifted some restrictions on public gathering. Public Schools and Universities are to be reopened for only final year students to complete their studies and write their respective examinations. Churches and mosques are to resume but restricted to not more than 100 people at a time and not exceeding a duration of 1 hour. Other activities like conferences, weddings, workshops, private burial, and restaurant operations were to be open but restricted to a maximum of 100 persons at a time. All other bans were to remain. Public institutions like the Electoral Commission and National Commission for Civic Education were to resume their duties bearing in mind all the safety protocols.

The COVID 19 situation at this time stood at; 218,425 tests conducted, 8,070 confirmed cases, 2,947 recoveries and 36 deaths. Though the President attributed the government's decision to advice from experts (citing our low

death and hospitalization rates) and multi - stakeholder consultation on the way forward, a section of the public continues to question government's motivation behind these choices.

4.16. The Production of Nose Masks and Hand Sanitizers

The production of nose masks and hand sanitizers began in the month of April, 2020. All major markets across the length and breadth of the country were disinfected. On 10th April, 2020 Professor Jacob Plange-Rhule, Rector of the Ghana College of Physicians and Surgeons died from Covid-19 at the University of Ghana Medical Centre in Accra (Africanews, 2020). The Ministry of Education in conjunction with "Zoomlion (a local Waste Management Company)", joined forces to fumigate all senior high, special and technical schools in the country in a bid to curb the spread of the pandemic. On 19th April, 2020 the partial lockdown that had been imposed three weeks earlier was lifted. On 30th April, 2020 the total number of Covid-19 infected cases came to 2,074, with 212 recoveries and 17 deaths. It is worthy to note that the Savannah, Bono, Ahafo, and Bono East regions had still not recorded any cases yet.

4.17. Imposition of Restrictions

On the 10th of May, 2020 the Government extended the restrictions till the end of May. But on 11th May, 2020 the Government granted permission to hotels, bars and restaurants permission to reopen, but under enhanced social distancing protocols. On 19th May 2020, "695 persons tested positive" at a fish processing factory in Tema after a worker contracted the virus and infected over 500 of his colleagues (Graphic Online, 2020h). On 20th May 2020, "30 health workers" tested positive for the virus at the Kumasi Centre for Collaborative Research (KCCR) in their line of duty in the Ashanti region (Daily Guide, 2020). On the 29th May 2020, about 50 workers working at the offshore Jubilee Field operated by Tullow Oil tested positive to the virus (Graphic Online, 2020i). By 31st May 2020, 218,425 tests had been conducted, with 7,881 testing positive, 2,841 recoveries, 36 deaths, and 5,087 active cases.

With effect from the beginning of June there was some relaxation of restrictions. Religious services were allowed to commence effective Friday, 5 June, with mandatory use of nose masks and with congregations not exceeding 100. Private burials with a maximum attendance of 100 persons were allowed. Similarly weddings and other social gatherings could take place with no more than 100 people attending. Ghana's borders remained closed. According to the new Executive Instrument, E.I. 64, signed by the President on 15 June 2020, people who refuse to wear face masks in public could face jail terms of between 4–10 years or a fine of between GHC12,000 (approximately US\$2,065) and GHS60,000 (approximately US\$10,320) or both would be made.

4.18. Revised Recommendations by WHO

Government calmed fears over the implementation of the new COVID-19 discharge policy which was in line with the WHO revised recommendations that allowed for asymptomatic COVID-19 patients to be discharged after 14 days without test. On 13 June 2020, the Minister of Health tested positive for the disease and was admitted at the University of Ghana Medical Center in Accra. The President also confirmed that the Chief Executive of the Sekondi-Takoradi Metropolitan Assembly, Kobina Kurentsi Sam (Graphic Online, 2020j), had passed away due to COVID-19. On 16 June 2020, the CEO of the National Health Insurance Authority (NHIA), tested positive for the virus. On 24 June 2020, the Education Minister was detained at the UGMC over fears of the virus infection. Member of Parliament for Okere was admitted at the same facility with the Education Minister (Graphic Online, 2020k).

4.19. Cancellation of the 2020 Hajj Pilgrimage

On 23rd June 2020, the National Hajj Board decided to refund monies paid by potential pilgrims as Saudi Arabia had refused to accept visitors from outside the Kingdom as a result of the Covid-19 pandemic. On 25th June 2020, about GHC25 million was distributed to some institutions from the National Covid-19 Trust Fund. On 28th July 2020, transport fares were reduced by 10% after operators were allowed to take full capacity. A former General

Secretary of the New Patriotic Party died after testing positive for COVID-19 at the Intensive Care Unit of Korle-Bu Teaching Hospital. Campaign manager for New Patriotic Party and the Deputy Minister for Trade and Industry tested positive for COVID-19 and were admitted at the Korle-Bu Teaching Hospital. A Consultant Surgeon of the Trust Hospital died after testing positive for COVID-19. He is the fourth medical doctor to succumb to the disease in Ghana (Graphic Online, 2020).

4.20. The President Self-Isolates for Covid-19

The president of Ghana, Nana Akufo-Addo went for a 14-day self-isolation after a person within his close circle tested positive for COVID-19. Six Accra Girls SHS students tested positive for COVID-19. The president completed his two weeks self-isolation of the coronavirus. The Korle-Bu Teaching Hospital announced the suspension of non-emergency surgical cases for two weeks to protect clients and staff from being infected with COVID-19. Senior Minister, Hon Osafo Maafo, tested positive for COVID-19 and was confirmed by the Information Minister. On July 21, the MP for Assin Central, Kennedy Agyapong revealed he tested positive for COVID-19 after he celebrated his 60th birthday on June 16, 2020.

4.21. The Chief Justice Self-Isolates for Covid-19

The Chief Justice returned to office after he went for 14 days isolation from the public, since the 8th of July, 2020. Ghana's Supreme Court adjourned all cases which were scheduled in July. The COVID-19 National Trust Fund spent over GHC32 million Ghana cedis to aid in the fight against COVID-19 in Ghana. The Minister for Information discredited the government's response strategy to COVID-19. The Government distributed 50,000 PCR testing kits and other kits to COVID-19 testing facilities across Ghana. Government spent US\$35 million on testing for COVID-19 suspected cases. This amount was not part of the expenditure on the expansion of testing capacity according to the Deputy Health Minister. The Finance Minister claimed in his report that the Government spent about GHC54.3 million Ghana cedis to provide cooked and uncooked food to the vulnerable during the three-week lockdown.

4.22. Ghanaian Nurses on Loan to Barbados Test Positive to Covid-19

On Sunday, 2 August 2020, according to the acting Chief Medical Officer of Barbados, Dr. Kenneth Georgeit, nine out of the 95 Ghanaian nurses who travelled to Barbados to work for two years have tested positive for COVID-19. A new COVID-19 Business Tracker Survey conducted by the Ghana Statistical Service (GSS), in collaboration with the United Nations Development Programme (UNDP), and the World Bank showed that about 770,000 workers (25.7% of the total workforce), had their wages reduced and about 42,000 employees were laid off during the country's COVID-19 partial lock-down. Parliament of Ghana approved a tax waiver on income taxes of GHC174 million cedis (equivalent to US\$30 million) for front line health workers.

4.23. Reopening of Borders

President Nana Akufo-Addo chose 1 September 2020 as the date to reopen the borders which have been closed due to the outbreak of COVID-19 in Ghana. On that same date, the Deputy Health Minister justified the \$150 fee charged for the antigen testing at the Kotoka International Airport. Data from the NBSSI indicated that about 120,000 out of the over 700,000 who applied for the CAP Business Support Program were said to have received financial support. Government claimed it spent over GHC76 million in the disinfection, fumigation and cleaning-up of markets, lorry parks and other social amenities across the country. The Ministry of Finance claimed there was an increase in cost of servicing the national debt which was caused by the shock brought about by COVID-19 which caused revenues to fall.

4.24. Signs of Economic Recovery

The Finance Minister claimed there is a possible post-COVID-19 economic recovery and attainment of SDGs with digitization, increase in private capital etc. The Governor of the BoG claimed the economy of Ghana began to experience some recovery as price pressures which was a result of the COVID-19 pandemic restrictions and lock

down. GSS revealed in a survey that about 90 per cent of businesses in Ghana recorded low sales during the lockdown period. Government extended the free water package to the end of 2020 due to COVID-19.

The President donated 10,000 beds to the MoH for distribution to health centers across Ghana. Government supported entrepreneurs with disability in the Northern, North East and Savannah regions with an amount of GHC200,000 to help them in their businesses due to the impact of COVID-19. According to the Information Minister, the Government took note of new waves of the virus in Europe and the US. He also called on Ghanaians to keep on adhering to the COVID-19 protocols to prevent a new wave of infections. He also claimed that the testing regime that was used at KIA would help prevent the importation of the virus. According to the Deputy Minister for Foreign Affairs, 2,262 Ghanaians in Lebanon were evacuated during the COVID-19 lock down and an amount of \$1,062,600 was spent.

4.25. IMF Cautions Ghana and Other African Countries

The IMF cautioned Ghana and other African countries on debts due to the crisis caused by the pandemic. According to the GIPC, the country clearly cruised from the impacts of the pandemic compared to other countries. Government with the support of WFP disbursed an amount of GHC11 million to vulnerable people in three regions in the country. The Government through the Deputy Minister for Trade claimed about 18.8million face masks were manufactured in the country, and also more than 10,000 jobs were created locally for PPE production. Government claimed it spent about GHC11.788 billion and created more than 350,000 jobs across Ghana and also saved \$16.8 million. An economist claimed the effect of COVID-19 on economies might go beyond a century. A research conducted by AGI revealed about 89% of businesses were affected by COVID-19. According to the Finance Minister, about 19 SOEs lost about GH¢1.6 billion because of the pandemic. Ghana's maritime sector was disrupted by the pandemic as it impacted the shipping industry with drops in imports and exports. Government claimed a 100-bed Infectious Disease Center would be opened to help fight against the virus. The Chairperson of the COVID-19 National Trust Fund claimed the Fund was in need of funds to undertake its duties.

4.26. Reopening of Borders and Stimulus Packages

On 1 September, the air borders of the nation were reopened. On 31 August, the MoH claimed Ghana has put in place enough measures to detect possible COVID-19 cases at KIA. According to the Director of the GHS, children under the five years, air crew and passengers on transit would not undergo testing for COVID-19 at the Kotoka International Airport. Travelers that arrive in Ghana by air were expected to pay US\$150 for COVID-19 test as part of measures to control the spread of the virus in Ghana. On 14 October, the Board of Executive Directors of the World Bank gave an approval of US\$12 billion for 111 countries to finance the buying and distribution of COVID-19 vaccines and other items for their citizens.

On 11 November, Ghana's World Bank Country Director claimed an amount of US\$130 million was approved for the country to support those affected by COVID-19. In June 2020, Ghana was ranked as the country with the fourth-highest number of COVID-19 cases in Africa with 12,929 cases. Ghana was ranked as the 'best' responsive country in Africa on COVID-19 prevention measures and other factors in a report by Yicai Media Group.

In a survey in October, 2020, about 3% of Ghanaian participants were scared their companies would not survive the COVID-19 crisis. In October, the Finance Minister claimed Ghana was among the 'best' 3 countries in the world to have managed the crisis during the pandemic. Ghana's Trades Union Congress (TUC), revealed an estimated 100,000 job losses in the formal sector and 400,000 in the informal sector after a market research. All these jobs were lost in less than 6 months after the first COVID-19 case in March, 2020.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Control and Prevention

Measures for protecting workers from exposure to, and infection with, SARS-CoV-2, the virus that causes Coronavirus Disease 2019 (COVID-19), depend on the type of work being performed and exposure risk, including potential for interaction with people with suspected or confirmed COVID-19 and contamination of the work environment. Employers should adapt infection control strategies based on a thorough hazard assessment, using appropriate combinations of engineering and administrative controls, safe work practices, and personal protective equipment (PPE) to prevent worker exposures. Some OSHA standards that apply to preventing occupational exposure to SARS-CoV-2 also require employers to train workers on elements of infection prevention, including PPE.

OSHA has developed this interim guidance to help prevent worker exposure to SARS-CoV-2. The general guidance below applies to all U.S. workers and employers. Depending on where their operations fall in OSHA's exposure risk pyramid (Spanish), workers and employers should also consult additional, specific guidance for those at increased risk of exposure in the course of their job duties broken down by exposure risk level.

5.2. General Guidance for All Citizens

For all citizens, regardless of specific exposure risks, it is always a good practice to:

- Frequently wash your hands with soap and running water for at least 20 seconds. When soap and running water are unavailable, use an alcohol-based hand rub with at least 60% alcohol. Always wash hands that are visibly soiled.
- Avoid touching your eyes, nose, or mouth with unwashed hands.
- Practice good respiratory etiquette, including covering coughs and sneezes.
- Avoid close contact with people who are sick.
- Stay home if sick.
- Recognize personal risk factors. According to the U.S. Centers for Disease Control and Prevention (CDC), certain people, including older adults and those with underlying conditions such as heart or lung disease or diabetes, are at higher risk for developing more serious complications from COVID-19.

5.3. Identify and Isolate Suspected Cases

- In workplaces where exposure to COVID-19 may occur, prompt identification and isolation of potentially infectious individuals is a critical first step in protecting workers, visitors, and others at the work site.
- Wherever feasible, immediately isolate individuals suspected of having COVID-19. For example, move potentially infectious individuals to isolation rooms. On an aircraft, if possible and without compromising aviation safety, move potentially infectious individuals to seats away from passengers and crew. In other work sites, move potentially infectious individuals to a location away from workers, customers, and other visitors and with a closed door, if possible.
- Take steps to limit the spread of the individual's infectious respiratory secretions, including by providing them a facemask and asking them to wear it, if they can tolerate doing so. Note: A surgical mask on a patient or other sick person should not be confused with PPE for a worker; the surgical mask acts to contain potentially infectious respiratory secretions at the source (i.e., the person's nose and mouth).

The COVID 19 pandemic threat has shaken the core of human existence and countries have found themselves running after the pandemic instead of having a strategy to face it head-on. The interventions outlined here highlight what has been done for the benefit of the public. The successes chalked could be attributed to the prompt response by government and multi-sectoral engagement. These responses have sometimes been saddled with challenges such as adherence to social distancing particularly in poorly structured markets and slums around the regional capitals, implementation challenges such as improper addressing systems for proper contact tracing, isolated cases of abuse of citizenry by enforcement officers with occasional outbursts by the Opposition when their expectations don't converge with those of government.

Weathering through the COVID 19 pandemic has shown the resilience of the Ghanaian people in adversity and has also laid bare the cracks in the society and the urgency to tackle them. There is no doubt that Science and Technology stands tall in this fight considering all the evidence before us. Governments all over the world therefore need to commit to the establishment of a National Research Fund to support basic and applied research.

Due to the unbridled spending on the part of ALL governments, the Fiscal Responsibility Act to cap the budget deficit not to exceed 5% for any fiscal year was passed in 2018. However, the Act's applicability remains to be seen in fiscal year 2020 as the International Monetary Fund (IMF) in its October, 2020 Fiscal Monitor Publication, has predicted that Ghana's fiscal deficit will reach 16.4 percent of GDP this year (up from the initial government projection of 4.7 percent of GDP), the largest in the country's history. This projection is not only the highest in Ghana's history, but will also become the biggest deficit in sub-Saharan Africa.

One of our major recommendation was that with the approval of Pfizer/BioNTech Covid-19 vaccine by the UK's MHRA on 1st December, 2020 (BBC News, 2020b); and subsequently by the US FDA a week later on 8th December, 2020 (CNN, 2020b), all governments around the globe in general, but Africa in particular, must make conscious efforts backed by adequate budgetary allocations to secure maximum quantities of the vaccines for their vulnerable teeming population. This is because despite its huge trial successes in Europe and the US, huge challenges still remain with the Pfizer/BioNTech vaccine with regards to the alarm being raised about its equitable access, logistics, distribution, and, perhaps most significantly, cost.

This chronicle of Ghana's COVID-19 response has key lessons for Africa and the entire developing world. Some economists cautioned of the potential consequences of the partial lockdown and general restrictions on economic growth, considering the fact that public sector expenditure is on the increase to meet specific COVID-19 financial stimulus and other social intervention demands. Was the lifting of the lockdown by the Ghana Government premature? The Government of Ghana continues to roll out directives to open up the economy and bring life back to "normalcy". Could the Government have sustained the initial interventions any longer? Could the Government of Ghana have done the management of the Covid-19 pandemic differently? The verdict is yours.

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IT Freelancing in Bangladesh: Assessment of Present Status and Future Needs

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Abstract

The tremendous changes that business and economic activities worldwide have gone through in the last few decades, have opened new avenues for IT Freelancing to establish itself as the next big thing in business arena. Bangladesh, transitioning to more IT-centric businesses, holds a huge potential in this domain and has already emerged as a global freelancing hub under government patronage. The main objective of this study is to assess the present status and the future needs of IT Freelancing Business in Bangladesh. This study is of descriptive nature and based on primary and secondary data. Relevant statistical analyses were performed using SPSS. The study found that, 96.2% freelancers are below 35 years old and 80.8% have completed the tertiary education. Significant gender gap exists among the freelancers in terms of participation. It is found that 73.1% freelancers are working on a part-time basis and 33% want to be IT entrepreneur. Half of the freelancers have received training from government and private IT Institutes. Most of the freelancers are satisfied with the earnings from freelancing. Freelancers have observed lack of capital and IT infrastructure support, shortage of training facilities, payment-related issues and social barriers. In order to face the challenges of the fourth industrial revolution head on, the government should take initiatives for ensuring country branding, mobilization of funds, better internet connectivity and steady flow of foreign currency earnings from IT sector and thereby actualizing the 'Digital Bangladesh' agenda.

Keywords: IT, ICT, ITES, Freelancing, Digital Bangladesh

JEL: E24, J24, L86, L96, N85, O14, O25

1. Introduction

In 21st century the world has become tantamount to a big village closely knit by the web of connectivity, thanks to the blessings of Information and Communication Technology (ICT). Anything and everything around the globe

are now shared with the rest of the world. Science, innovation, politics, religion, culture, sports, education, business, and what not, all of these are observed by billions of people around the planet. This has brought about changes in the way people practice their day to day activities. ICT has opened new avenues for everyone. Business and economic activities have gone through tremendous changes in the last few decades as the paradigm has shifted to a more inclusive one than the past. Now, people from the most remote parts of the world can engage themselves in activities taking place thousands of miles away, across the ocean and continent. Thereby, comes the concept of 'Online Freelancing'. This concept emerged, not many years ago but has spread rapidly ever since. People with the necessary skill sets can now deliver products and services to individuals and organizations existing in the furthest places. Just like the traditional markets, online marketplaces have come into being to bring together the people in search of products and services and the people having the means to deliver the same. IT and ICT based freelancing thus have created a whole new area where lots of research and studies can be done. For some countries, this new area of economic activities has transpired itself to be a significant one that merits proper attention from the policymakers since lots of remittance and income are being generated by means of online freelancing. For Bangladesh, being a country that is transitioning to graduation from Least Developed Country (LDC) status, the IT freelancing sector can prove to be even more crucial from the economic point of view.

Even though in many other countries plenty of studies (Dubey et al., 2017; Gheorghe, 2015; McKeown, 2015; Yoganarasimhan, 2012) have been conducted to assess the scenario of IT-based freelancing sector, there is dearth of research in the Bangladeshi context. This study seeks to fill up that void and thereby paving way for the future research to be conducted in the field of IT-based freelancing.

In rest of this paper, section two through four outline respectively - the objectives of the study, the methodology applied, and some limitations faced. The literature review section starts with theoretical discussion on Information Technology (IT), Information and Communication Technology (ICT) and Information Technology Enabled Services (ITES), followed by the chronological development of IT, ICT and ITES in Bangladesh. An extensive literature review of the studies related to IT-based freelancing around the world is made after that. The next section i.e. section six, showcases present status of the IT freelancing in Bangladesh. Challenges faced in this new area of business are discussed in the follow-up section, whereas section eight sheds some light onto how to cope with various challenges. In the penultimate section, the future needs of the IT freelancing sector of the country have been outlined. Finally, a conclusive remark draws curtain on the study yet leaves some food for thought regarding future research endeavor into the area of IT freelancing.

2. Objectives of the Study

Since Bangladesh has been moving forward steadily in terms of economic growth over the last decade, exploring new areas of business can expedite such progress. IT and ICT based freelancing could be one of such areas where lot of potential is there for the country. Thus, the main objective of this study is to assess the present status and the future needs of IT Freelancing Business in Bangladesh which will help in formulating policies beneficial to the freelancing community.

3. Methodology of the Study

The study is descriptive in nature and based on both primary and secondary data. The population of the study consisted of all the freelancers of Bangladesh who started their freelancing business during the last three to seven years and continuing their business till now. The survey sample included the freelancers working from 6 out of 8 divisions across Bangladesh. The study developed a sample frame and used purposive sampling techniques to select the sample. The primary data for this study was collected by a self-structured questionnaire survey. The survey questionnaire was designed with some open and close ended questions some of which were previously used in similar research (Bose et al., 2013; Rahman & Rahman, 2017; Das et al., 2018). Besides these, some socio-demographic questions were incorporated here for the better understanding of the study impact. The questionnaire was pre-tested and edited. The study targeted 75 respondents for the survey, but it enabled to reach 63. Finally, the sample size of the study was determined 52 and the rest of the data were dropped in case of incompleteness. Secondary data was also collected from different published journals, book, websites and other relevant sources.

The data were analyzed using necessary statistical tools and techniques with the help of different statistical software packages. Data has been presented and interpreted keeping in mind the objectives of the study.

4. Limitation of the Study

If a greater sample size was taken, the survey result could have been more representative of the prevailing scenario. Moreover, only the individual freelancers were surveyed. Inclusion of institutional freelancers would have revealed some other important issues regarding IT freelancing. While conducting the study it was seen that there is an absence of a comprehensive national database on freelancing statistics e.g. freelancers' profiles, earnings, client information etc. Reluctance to provide information on the part of the respondents also posed a problem during the survey.

5. Literature Review

The literature review section has been segmented into three discussions. The first section presents a theoretical discussion on the issues of IT, ICT, ITES, Outsourcing, Freelancing and Online Marketplace. The following section seeks to present an elaborate discussion on the chronological development of IT and ICT in Bangladesh along with milestones and achievements for the country in the sector. The final section delves into a review of relevant literature in the field of IT and ICT based freelancing.

5.1 Theoretical Discussion on 'IT, ICT and ITES', 'Outsourcing', 'Freelancing', 'Online Marketplace'

5.1.1 IT/ICT/ITES

Information Technology (IT) is defined as the computing and communication technologies for solving real-life problems; it includes computing environments, general application software like visual presentation applications, word processing, tabular data manipulation, World Wide Web, Database Management System, e-mail management systems, virus, and spam protection. It also includes introduction to the basic computing hardware, data networks, and operating systems. Software engineering and communication technology along with social and ethical issues also falls under IT (Turban, et. al., 2003). All digital and computational forms of technology i.e. hardware and software are defined as Information and Communications Technology (ICT) (Shklovski, et. al., 2008). According to Heiskala, et. al., (2011) - Information technology-enabled services (ITES) involves digitizing and codifying transactions through information and communications technology (ICT) that bears potential to transcend the inherent limitations of traditional, labor-intensive "in situ" service models.

5.1.2 Outsourcing

Outsourcing is defined as the act of obtaining goods or services from individuals or organizations outside of a firm's boundaries (Brown and Wilson, 2005). As per Quélin and Duhamel, (2003) outsourcing involves shifting of a transaction to an outside supplier through a long-term contract that was previously governed internally, and also may involve the transfer of staff to the vendor.

5.1.3 Freelancing

Freelancers can be defined as skilled professional service providers who are neither employees nor employers, supplying labor on a short time basis under a contract for works or services in exchange of a fee to a range of business clients (Mould, et.al., 2014).

5.1.4 Online Marketplace

An online marketplace is a system that connects buyers and sellers in a time-sensitive and efficient manner. The system enables users who want something to connect with nearby users who can provide that something by applying automatically detected location data from the users' computing devices (Hunter, et. al., (2012). Some of

the most popular and active marketplaces bringing the freelancers and clients together around the world are- Upwork (previously oDesk and Elance), Fiverr, 99designs, Toptal, PeoplePerHour, Freelancer.com, iWriter, Guru etc. While there are lots of other international and local marketplaces, professional networking platforms of the likes of LinkedIn are also often seen to be providing freelancing opportunities to the community.

5.2 Chronological Development of IT, ICT and ITES in Bangladesh

5.2.1 The Developments

The IT/ICT/ITES landscape in Bangladesh has traversed almost half a century since the country's independence. During this time many developments have taken place that paved the pathway for freelancing in the 21st century. The use of computer in Bangladesh began in the 1960s. It became more prevalent in the 1990s and now widespread use in both offices and homes are found across the country. The first-ever computer in Bangladesh was installed at the Atomic Energy Commission in 1964. After that the use of mainframe computers for scientific and business data processing became a necessity for many organizations. An IBM 360 computer was set up at the Bureau of Statistics in 1969. The Adamjee Jute Mills also brought a mainframe for them in the similar time period. In the post-independence landscape, the computerization process was rejuvenated. Bureau of Statistics played a vital role in that. They brought and put into use computers like IBM 370, IBM 9100 and IBM 4341 etc. in phases since 1972. At the end of 1979, Bangladesh University of Engineering and Technology (BUET) introduced two Mainframe computers- IBM 370 and an IBM 4331- at the University and BUET Computer Centre was also founded. Throughout the 1980s many other institutions such as Atomic Energy Research Establishment (AERE), The Dhaka University Computer Centre and so on brought mainframe computers for their use. In Bangladesh, the institutional computer education began with the founding of the Computer Science and Engineering Department, BUET in 1984. Dhaka University launched its Computer Science Department in 1992. Presently, computer education is offered in almost all of the public and private universities. National University has also incorporated computer education in its curriculum. Higher secondary and secondary education had also included this area in their curriculum back in 1991 and 1994 respectively. Besides these, many other institutions across the country, are disseminating computer literacy for betterment. The revolution of microcomputers that started in the 1980s, had engulfed Bangladesh also, starting in the 1980s and becoming more prevalent in the 1990s. Now-a-days it is rare to observe any financially capable household devoid of a computer (Banglapedia, 2014).

First attempts to write Bangla on computer were made soon after the use of computer started in the 1980s. Developments took place in the form of making- Bangla fonts, keyboard layouts, Bangla interfaces, Bangla word processors etc. Exportable software development in Bangladesh began in 1995. In 1988, 'Bijoy' of Anando Computers and in 2003, 'Avro' of OmicronLab took Bangla writing on computer to the next level. Government promotes local software by extending tax benefits. At present more than 400 IT firms exports software and IT services all over the world. ICT export brought USD 1 billion in 2018 for the country and it is anticipated that by the year 2021 this amount will be about USD 5 billion. Besides the enterprises, there are approximately 5,00,000 active IT/ITES professionals working in the country.

A National Computer Committee was formed by the Ministry of Science and Technology in 1983. The committee was tasked to create the required policies while carrying out programs to expand and promote the effectual use of the sector. In 1988, the National Computer Board replaced the previous National Computer Committee. Within a very short time, in 1990, the ministry reformed the National Computer Board by reconstituting it as the Bangladesh Computer Council (BCC) to monitor computer-and IT-related undertakings in the country. BCC now works as a government advisory body on IT issues. Besides the government initiatives, there have been non-government efforts as well to take further the cause of IT/ICT/ITES in Bangladesh. In the late 1990s, Bangladesh Association of Software and Information Services (BASIS) was established. Established in 1998, BASIS acts as the national trade body for software and ITES industry of the country. The computer businessmen of the country formed Bangladesh Computer Samiti (BCS) in 1992. Later on September 1999, they established an extensive computer accessories market called BCS Computer City at IDB building located in Agargaon, Dhaka. The importance of these non-government bodies in the IT/ICT/ITES landscape of the country is paramount.

Back in 1995, use of internet in the country started for the first time in a limited capacity via offline e-mail. At present the number of nation-wide Internet Service Provider (ISP) stands at 129 as per BTRC. The government of Bangladesh as well as its various bodies now have web-presence through dedicated websites and portals. Corporations and other kinds of profit and non-profit organizations in Bangladesh now maintain websites for information dissemination. The internet penetration rate in Bangladesh has seen steady growth over the years among which the last five years had the highest rate –by the share of population 14.4% in 2015, 18.02% in 2016, 15% in both 2017 and 2018, 12.9% in 2019 (Statista, 2020). At present four mobile network operators are operating in Bangladesh. The first of these came into being back in 1989. All of these operators now provide 4G/LTE connectivity to the consumers. Though Bangladesh has seen great change in the country's overall internet infrastructure in the past decades, it still lags behind at rank 184 out of 221 countries in terms of broadband internet bandwidth (Cable.co.uk, 2020).

The advancement of IT/ICT/ITES in the country have blessed the financial institutions including the overall banking system tremendously. Banks are maintaining databases, extending their various services through online channels. The number of banks providing Mobile Financial Services (MFS) in the country right now is 15 and the average daily transaction stands at (in crore BDT.) 1,718.03 (Bangladesh Bank, 2020). Use of ATM is widespread in the major cities of the country. VISA, MASTERCARD, Skrill, Payoneer and similar other payment technology solutions are operating in Bangladesh. PayPal, a popular online payment system, came into service in Bangladesh in the late 2017. This development came as a long-awaited one from the freelancer community of the country.

The European Union (EU) ranked Bangladesh among the top 20 outsourcing destinations even though the country's small and medium enterprises (SMEs) had been suffering from lack of proper policy, legal framework and infrastructure including awareness. For a long period of time, ICT had been priority in policy but not in action in Bangladesh (bdnews24.com-Bangladesh's First Internet Newspaper, 2005). The lack of action in the area started to change when the extant Government committed to their 'Digital Bangladesh' agenda.

As part of the Bangladesh Government's Digital Bangladesh Agenda, in 2007 Access to Information, colloquially known as a2i was established. a2i is a flagship program, working closely with the Prime Minister's Office, specializing in citizen-centric public services innovations. The effort strives to simplify public service delivery and thereby improving the lives of the citizens of the country by enhancing overall transparency, governance and reducing the time, cost and difficulty in obtaining the governmental services. The program also aims to ensure information to the public as per the regulations of Right to Information Act, 2009. Till date, a2i has saved \$8.14 billion and 1.92 billion days through innovative and simple digital public services.

The year 2010 marks a significant development for the IT/ICT scene of the country as Bangladesh Hi-tech Park Authority (BHTPA), a government agency, was founded dedicated to establish, manage and operate technology business parks throughout the country. On 18 October, 2015 a Software Technology Park (STP) at Janata Tower was inaugurated by the Advisor to the Government of Bangladesh on Information and Communication Technology. The STP is situated at the heart of Dhaka city. It is a state-of-the-art, 12 storied multitenant building that accommodates IT companies, where conducive business environment is created and nurtured for smooth running for multi-national companies (Bangladesh Hi-Tech Park Authority, 2017). Similar other establishments such as- High-Tech Park, High-Tech City and Incubation Centers are under construction. Currently, there are 11 ongoing projects across the country, under the supervision and authority of BHTPA.

In a landmark development, Bangladesh got connected to its first-ever undersea cable South East Asia-Middle East-Western Europe 4 (SEA-ME-WE 4) in 2006. The second submarine cable SEA-ME-WE 5 was installed in 2017. (The Independent, 2017). The state-run Bangladesh Submarine Cable Company Ltd (BSCCL), established in July 2008, is now in the process of getting the third submarine cable of the country (The Daily Star, 2019).

Doel, the namesake of the national bird of Bangladesh, was the first laptop developed in the country, as part of national education program back in 2011. State-owned telecom company Telephone Shilpa Sangstha (TSS) undertook the operation, making it to be one of the world's cheapest laptop (Ethirajan, 2011). Bangladesh still remains unaccustomed to producing computer components and thus rely on imported accessories.

Back in September, 2014, Bangladesh was awarded by World Information Technology and Services Alliance (WITSA) with the prestigious ‘Global ICT Excellence Award’ in the category of ‘Public Sector Excellence’ in recognition of outstanding contribution in social development of the nation using IT (The Daily Star, 2014).

In recognition of the contribution to promote the use of ICT towards achieving the UN Sustainable Development Goals (SDGs), the Bangladeshi Prime Minister Sheikh Hasina received "ICT Sustainable Development Award" from the International Telecommunication Union (ITU) in 2015 (The Daily Star, 2015).

On 10 December, 2017 Prime Minister Sheikh Hasina inaugurated “Sheikh Hasina Software Technology Park” in Jessore to create employment to 5000 people through 48 IT-firms. This development would open up a new horizon of potential in the Bangladesh ICT sector. (Dhaka Tribune, 2017).

In the General Election of 2018, Electronic Voting Machine (EVM) was used in limited capacity. In future this technology is expected to be used widely. The Bangladesh Telecommunication Regulatory Commission (BTRC) awarded 4G licenses to the country’s four Telcos - Grameenphone, Banglalink, Robi and Teletalk on February 19, 2018 and thereby ushered Bangladesh into the fourth generation data services era (The Daily Star, 2018).

Bangladesh launched the country’s first-ever communication satellite on 10 May, 2018. The journey that started back in June 14, 1975 with the inauguration of the country’s first satellite earth station at Betbunia under Kawkhali upazila of the Rangamati district, by Father of the Nation Bangabandhu Sheikh Mujibur Rahman, has seen a new achievement unfold in the successful launching of Bangabandhu Satellite-1 in 2018. Through this event, Bangladesh became the 57th country in the world to have its own satellite in the orbit of the planet (Mustafa, 2018).

As of February 25, 2019, The Bangladesh Hi-Tech Park Authority (BHTPA) has been awarded the 'ISO 9001:2015' certification for quality management. Experts believe that such credential will attract more foreign entrepreneurs in the country's ICT sector (Uddin, 2019). In the late 2020, a joint initiative by ICT Division, Bangladesh Computer Council, iDEA Project, and Bangladesh Freelancers Development Society (BFDS) was made. Under this initiative a website – freelancers.gov.bd was launched. Also, a state-endorsed electronic/virtual identity card will be issued to the freelancers of the country. This identification will enable the freelancers to obtain credibility and move ahead smoothly with future endeavors (The Daily Star., 2020).

In order to meet the ever-increasing need of data, Bangladesh established a tier-3 National Data Center back in 2010. In 2019 a four-tier National Data Centre at Bangabandhu High Tech City in Gazipur was inaugurated and it is the 7th largest data center facility in the world (Dhaka Tribune, 2019). At present, both the governmental and non-governmental entities of the country are leaning toward technology. Entities with technical know-how and financial means are realizing that in today’s world where Blockchain Technology, Big Data and Artificial Intelligence are the new ways, adapting with IT/ICT/ITES is the only way moving forward, towards the fourth industrial revolution.

5.2.2. Annual Development Program (ADP) and the ICT Division

Table 1: Year-wise ADP Allocation for the ICT Division

Fiscal Year	Allocation (in lac BDT.)	Progress
2018-19	1,45,023.87	84.64%
2017-18	3,26,046.00	90.03%
2016-17	1,59,452.00	79%
2015-16	95,409.00	120.55%
2014-15	81,141.27	102.16%

Source: ICT Division, (2019)

In the Annual Development Program of the country, the budget allocation for ICT Division has been significant and in the recent years the progress has also been high as the country is undergoing many development projects to achieve ICT transformation.

5.2.3 Bangladesh's Position in Various Index

Bangladesh and some other countries' position in Global Services Location Index by A.T. Kearney in the recent years are as follows:

Table 2: Global Services Location Index by A.T. Kearney (Compiled by the authors)

Country	Rank in 2019	Rank in 2017	Rank in 2016
India	1	1	1
China	2	2	2
Malaysia	3	3	3
United States	6	22	15
United Kingdom	8	19	25
Sri Lanka	25	11	14
Bangladesh	32	21	22
Pakistan	37	30	28

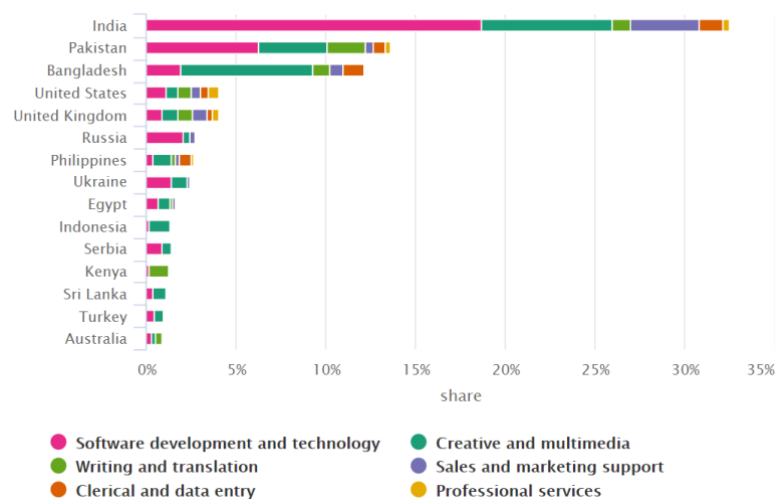


Figure 1: Market Share of Top 15 Worker Countries by Occupation.

Source: Online Labor Index (OLI) by the Oxford Internet Institute.

According to the Online Labor Index (OLI), Bangladesh currently holds the third position in the overall market share across six different occupational categories. Previously, Bangladesh held the second position, right after India. The top employer countries of the freelancing domain includes- USA, UK, Canada, Australia, India and Germany. Catering to the huge volume of works from these wealthy nations can definitely prove to be a stable foreign revenue earning source.

Table 3: ITU ICT Development Index of 2016 & 2017.

Country	IDI 2017 Rank	IDI 2016 Rank
Sri Lanka	117/176	116/176
India	134/176	138/176
Bangladesh	147/176	146/176
Pakistan	148/176	148/176

Source: ITU (2017)

Bangladesh was ranked 147th out of 176 countries in the ITU ICT Development Index 2017, maintaining a similar position from the previous years in the medium and low IDI groups. In 2015, Bangladesh's position was 143th with 2.25 points. In 2014 it was 145th position with 1.97 points and in 2013, Bangladesh's position was 146 (The Daily Star, 2016). The industry experts say that though Bangladesh's development index point increases every year, the country failed to grow faster in comparison with other countries. This slow growth could be attributed to a number of challenges. Fostering congenial environment and support system may prove to be helpful in overcoming these challenges.

The country secured 115th position out of 193 countries in the E-Government Development Index 2018 by UN. (BCC & ICTD, 2019).

5.3 Regulatory Framework of IT, ICT, ITES in Bangladesh

5.3.1 The National ICT Policy

The Bangladesh government devised the National ICT Policy in 2009 followed by amendments in 2015 & 2018 to actualize Digital Bangladesh by the year 2021. The National ICT policy includes a single vision, 8 objectives, 55 strategic themes and 343 action items. This policy was formulated based on the Article 19 of the Constitution of the People's Republic of Bangladesh, where it is clearly stated that "ICT is the best mean to ensure equality of opportunity to all citizens, remove social and economic inequality between men and women, and ensure the equitable distribution of wealth among citizens, and of opportunities in order to attain a uniform level of economic development throughout the Republic." (BCC & ICTD, 2019)

5.3.2 ICT and e-Governance related Laws in Bangladesh

To understand a sector, one must understand the legislature controlling the sector. There are a number of Acts that have been formulated over the years for dealing with the ICT and e-Government issues in the country.

Table 4: ICT and e-Governance Laws in Bangladesh.

Sl. No.	Law	Year of Enactment	Category of Purpose
1	Information & Communication Technology Act	2006 2008 (Amendment) 2009 (Amendment) 2013 (Amendment)	<ul style="list-style-type: none"> • Foundation for Information Society • Adverse Effect Protection • ICT Industry Development
2	Right to Information Act	2009	Information Service Promotion e-Government (Administration)
3	Bangladesh High-tech Park Authority Act	2010	Information Service Promotion Promotion for information environment
4	BCC Act	1990	Information Service Promotion Promotion for information environment
5	Telecommunication Act	2001	Adverse Effect Protection ICT Industry Development
6	Digital Security Act	2018	Adverse Effect Protection

5.3.3 IT/ICT Regulatory Bodies and Associations in Bangladesh

The onus of overseeing IT and ICT activities undertaken throughout the country falls on three ministries. The Ministry of Post and Telecommunications and Information Technology (MoPTIT) has two divisions. The Post and Telecommunications Division is the authority responsible for telecommunication infrastructure whereas the ICT Division works for eGovernment, IT/ITES business promotion, ICT policy formulation, supervision of ICT

projects etc. The Ministry of Science and Technology (MoST) discharges its duty by formulating national policies on science and technology and coordinating science and technology-based initiatives and activities of different ministries. Finally, the Ministry of Information (MoI) takes care of dissemination of information.

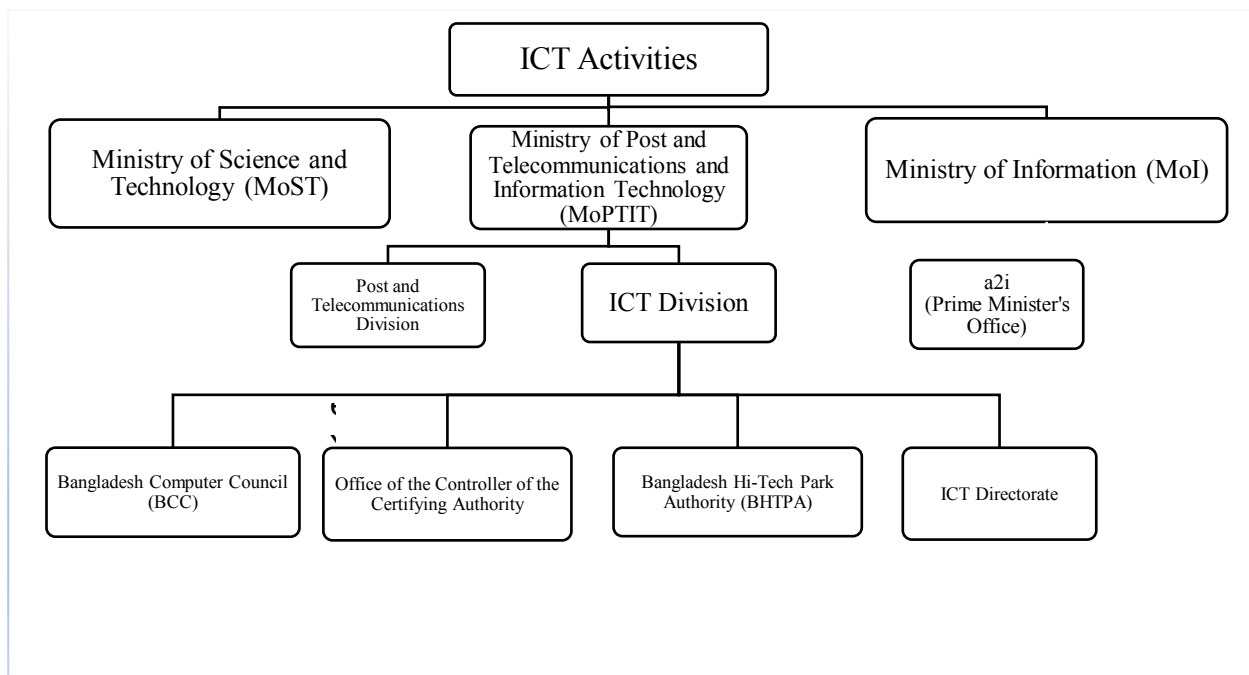


Figure 2: IT/ICT Regulatory Bodies in Bangladesh.

The ICT Division operates through four other organizations- the Bangladesh Computer Council (BCC), the Office of the Controller of the Certifying Authority, Bangladesh High Tech Park Authority (BHTPA) and ICT Directorate. Besides these, a2i, a sub-organization of the ICT division also works for ICT activities and e-governance while keeping close tie directly with the Prime Minister's Office.

While there is no organization solely dedicated to the e-Government, the Cabinet Division, ICT Division including a2i program, lead the overall ICT activities of the country.

BASIS: Beside the regulatory bodies, BASIS plays a pivotal role in the IT and ITES arena of the country. BASIS actively promotes the IT/ITES market, arranges flagship events like SOFTEXPO, provides recognition to the successful IT entities, extends exclusive memberships to IT firms and contributes to the overall IT eco-system of the country in many ways.

5.4 Review of Existing Literature in the Field of Research into IT-Freelancing

In the global context, a good number of research studies could be found relating to Online Marketplace based or IT Freelancing. Dubey et al. (2017) found out, upon a study conducted on 37,599 freelancers that a pay gap exists between male and female freelancers, even though it may be expected that such kind of gap should not be much, over the online platforms. In Gheorghe (2015), an overview of the most prominent Freelance Marketplaces has been furnished alongside critical examination of the market structure, distribution of workforce and overall trend in the IT freelancing landscape. McKeown (2015) talks about concepts such as entrepreneurship, self-employment, freelancing and Independent Professionals (IPro) in order to point out various implications and their consequences of social and government motives in relation to people working as 'nano-businesses'. Yoganarasimhan (2012) suggested a framework that uses 'dynamic selection' in matching buyers with sellers in an online freelance marketplace. In this work the author questioned the soundness of reputation-based matching systems.

Table 5: Earning Gap and Expectation Gap in Bangladesh for different job categories.

Job Category	Earning per hour (in USD)					Billing Rate (in USD)				
	Male		Female		Earning Ratio	Male		Female		Billing Ratio
	Median	Std. Dev.	Median	Std. Dev.		Median	Std. Dev.	Median	Std. Dev.	
Administrative	14	39.1	10	30	0.71	8.62	6.02	7.04	5.28	0.81
Design	20	38.1	7	61.1	0.35	11.32	7.28	8.85	4.74	0.78
Business Services	23	38	19	62.3	0.82	9.34	7.4	6.28	4.13	0.67
Networking & Infrastructure Management	24	54.4	13	30	0.54	13.54	8.28	10.24	8.85	0.76
Sales & Marketing	10	33.5	3	86.1	0.3	7.33	5.3	6.43	5.74	0.88
Writing & Translation	13	44.8	12	39.2	0.92	8.28	6.6	6.9	5.9	0.83
Software Development	23	97	17	59	0.73	11.4	7.2	10.1	6.9	0.88

Source: Dubey et al. (2017)

In the Bangladeshi context, Bose et al. (2013) conducted survey-based study to assess nine aspects related to freelancing in Bangladesh. The study pointed out that Intellectual Property Rights is a burning issue when it comes to software development and similar other creations in the country. In a study conducted in 2017, survey on freelancers in Bangladesh brought out a snapshot of how the then existing scenario was in the software and IT service industry of the country. The study investigated six specific areas to extract the prevalent practices (Das et al., 2018). In another study, the relationships between IT Freelancers' entrepreneurial behavior, IT self-efficacy and their performance were studied. The same study also sought to bring forth the association between social capital and IT self-efficacy (Sultana et al., 2019). Rahman & Rahman (2017), besides presenting the existing scenario of freelance market in Bangladesh, outlined IT freelancing as a solution to the country's ever-increasing unemployment problem. A holistic view focusing on the problems and prospects of IT and IT-enabled services (ITES) being outsourced from Bangladesh, is found in the work of Askari et al. (2015). In this study, the then-existing scenario and trend of IT & ITES industry in Bangladesh has been presented very thoroughly. One crucial area that is presented in that study is the existing government initiatives, policies and programs involving IT and ITES in Bangladesh. The all-time Payments in IT (in terms of USD) on elance.com (currently Upwork) for Bangladesh was \$6,641,611 which is 0.93 percent of the market share (12th Position in the world) (Gheorghe, 2015).

6. Analysis of Current Status of the IT Freelancing Business in Bangladesh

In the study, the current status of the IT-freelancing business in Bangladesh was assessed through conducting a questionnaire-survey. Respondents were asked a about range of issues starting from their social-demographic profile to pros and cons of conducting IT-freelancing operations. Under this section, findings about all those areas are categorized and presented in a coherent manner.

6.1 Socio-Demographic Profile of Freelancers

Table 6: Socio-Demographic Profile of Freelancers

Demographic Variables		Frequency	Percentage (%)
Age	Young (Less than 35)	50	96.2
	Adult (More than 35)	02	3.8
Gender	Male	48	92.3
	Female	4	7.7
Level of education	Up to Secondary Education	6	11.5
	Higher Secondary Education	4	7.7

	Tertiary Education	42	80.8
Educational Background	Science Background	22	42.3
	Non-Science Background	30	57.7
Language proficiency	Taken any certified courses on English language	20	38.5
	Taken any certified courses on other language	1	1.9
	No language training	31	59.6
Residential status	Rural Area (Village)	7	13.5
	Urban Area (Town)	45	86.5
Location of Workplace	Urban within City Corporation	36	69.2
	Rural	11	21.2
	Urban without City Corporation	5	9.6
Monthly Earnings	Up to BDT. 25,000	25	48.1
	BDT. 25,000-50,000	15	28.8
	BDT. 50,000-75,000	3	5.8
	BDT. 1,25,000-1,50,000	2	3.8
	More than 2,00,000	2	3.8
	Not interested to disclose their income	5	9.6

The Table 6 shows that the majority of the respondents in this study are male with only 7.7% female participants. Nearly all the respondents are from young age group (96.2%). Among the respondents, 80.8% have completed the Tertiary Education; 42.3% freelancers are from science and 57.7% freelancers are from non-science background. Besides, while more than half of the freelancers haven't taken any certified language courses, nearly 40% have taken certified English language courses. It was also found that, among the freelancers studied, about 87% are living in the urban areas. Moreover, 79% freelancers are working from urban areas- either within city-corporation or outside city-corporation. Almost half of the freelancers are earning up to BDT. 25,000 on average every month. Also, 29% freelancers have an earning range of BDT. 25,000-50,000 per month, while for 14% of total respondents, earning is varying at a range from BDT. 50,000 to 200,000 per month.

6.2 Status of the Freelancing Activities

Table 7: Status of the Freelancing Activities

Subject	Details Classification	Frequency	Percentage (%)
Are you a fulltime freelancer?	Yes	14	26.9
	No	38	73.1
For how long are you doing freelancing jobs?	3 years or more	16	30.7
	Less than 3 years	36	69.3
How many hours do you work in a week on an average?	Less than 10 hours weekly	11	21.2
	10-20 hours weekly	13	25.0
	21-30 hours weekly	15	28.8
	31-40 hours weekly	5	9.6
	More than 40 hours weekly	8	15.4
Is your working hour consistent over different jobs?	Yes	12	23.1
	No	19	36.5
	Neutral	21	40.4
Does freelancing generate stable income for you?	Yes	22	42.3
	No	13	25.0
	Moderate	17	32.7
Do you maintain multiple accounts in each	Yes	8	15.4
	No	44	84.6

marketplace for getting more jobs?			
What is your future plan regarding IT-Freelancing?	Continue as long as it earns enough money	18	34.6
	Continue for next few years	1	1.9
	Continue until getting a secured salaried job	14	26.9
	Become an IT entrepreneur	17	32.7
	Others	2	3.8
Have you received any national/international awards, accolades and recognition for doing IT-Freelancing?	Yes	4	7.7
	No	48	92.3

Table 7 shows that 73.1% freelancers are working on a part-time basis whereas 26.9% conduct freelancing on full time basis. On average in a week, four out of every five freelancers are working for 10 hours or more, with 15.4% freelancers working for over 40 hours weekly. In addition, often their working hour varies across different jobs, where 23% are enjoying a consistent working hour.

The study reveals that 42.3% of freelancers have supported Freelancing as a stable source of income but 25% freelancers have denied this proposition. About 33% have identified this as a moderately stable source of income. Furthermore, 85% of the freelancers are maintaining only single account in each marketplace to get their jobs. In addition, half of the freelancers want to continue freelancing as long as it provides a sufficient income for them or until they secure a salaried job. On the other hand, 33% freelancers want to grow as an IT entrepreneur. A very few freelancers (7%) have received national or international awards, accolades and recognition for doing IT-Freelancing.

6.3 Training Status and Expertise of the Freelancers

Table 8: Training Status of the Freelancers

Subject	Details Classification	Frequency	Percentage (%)
Have you received any training on freelancing works?	Yes	26	50
	No	26	50
What was the source of training?	Government IT Institute	9	34.6
	Private IT Institute	7	26.9
	Online Paid	9	34.6
	Online Unpaid/Free	1	3.8
What was the mode of training?	Paid	18	69.2
	Unpaid	8	30.8
What was the source of training?	Government IT Institute	1	3.8
	Private IT Institute	7	26.9
	Online Paid	9	34.6
	Online Unpaid/Free	1	3.8

The study shows that, half of the freelancers have received training. Their training sources include Govt. IT Institute, online training services, and Private IT institute. Majority of these freelancers used paid sources for receiving training, vastly from either Private IT institute or Online sources.

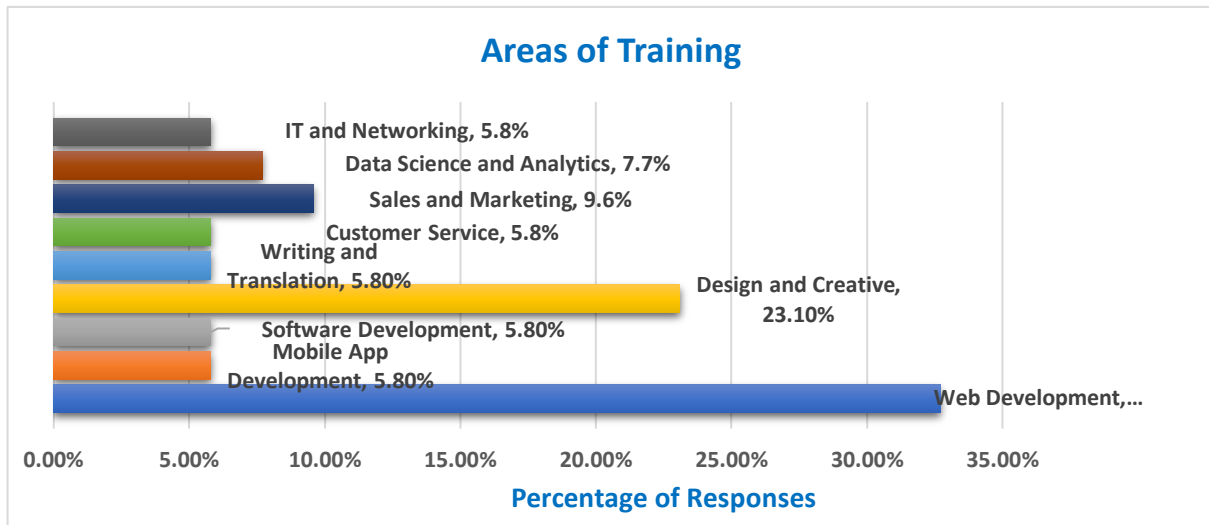


Figure 3: Areas of Training

A significant number of respondents have received training on Web Development and Design and Creative field. While the other areas of training include Sales and Marketing, Data Science and Analytics, Mobile App & Software Development, Writing and Translation, Customer Service etc., though they represent a minor percentage.

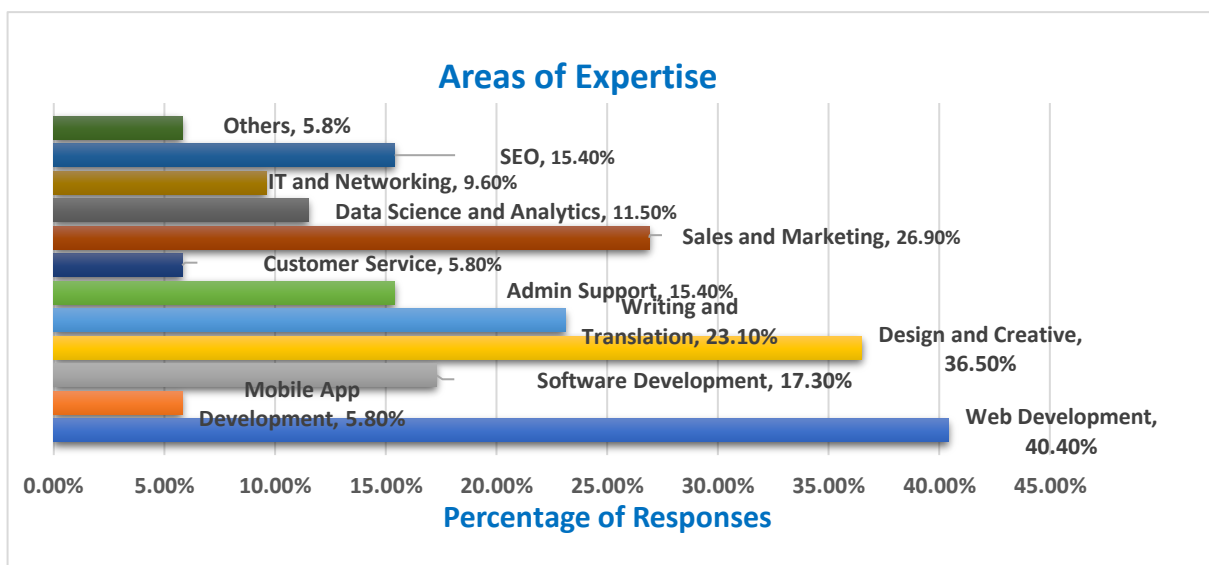


Figure 4: Areas of Expertise

With the training received, majority of freelancers have gained expertise in Web Development, Design and Creative, and Sales and Marketing field. Furthermore, Writing and Translation, Software Development, SEO, and Admin Support are the other mentionable areas of their expertise.

6.4 General and IT-Infrastructural Facilities

Table 9: Infrastructural Facilities

Subject	Details Classification	Frequency	Percentage (%)
Housing facility that you use for work	Rented	34	65.4
	Self-owned	18	34.6
Number of computers used for work	Single	37	71.2
	Multiple	15	28.8

According to the study, 65% freelancers are using rented housing facility to run their operations; rest of the freelancers are conducting operations from self-owned facility. A little more than 71% freelancers operate with single computer. Meanwhile, rest 29% freelancers are using multiple computer systems.

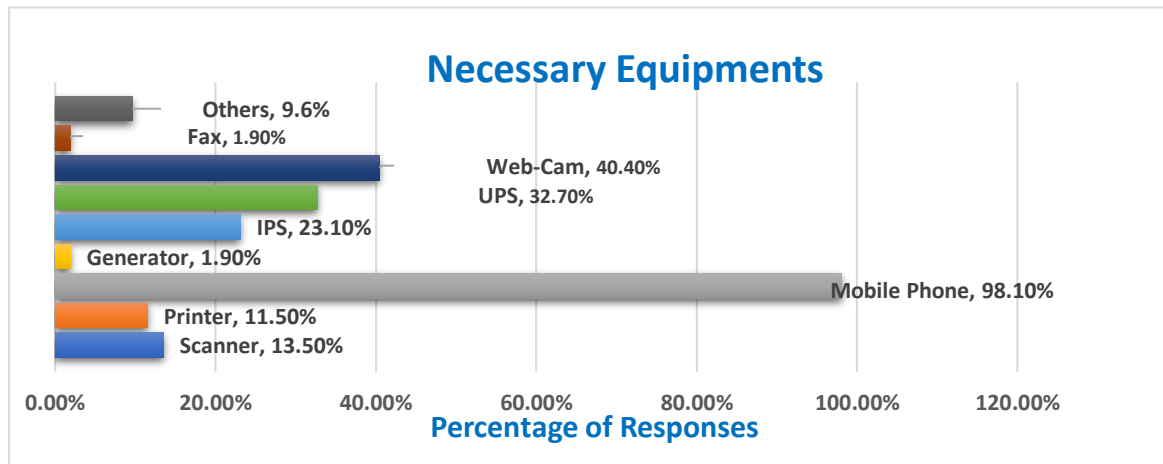


Figure 5: Necessary Equipment

Apart from regular/standard computer setup, Mobile phone is the most mentioned device they use in their operation followed by Web-Cam and UPS. Some of them also use IPS, Scanner, and Printer as supporting devices.

Table 10: Internet Support

Subject	Details Classification	Frequency	Percentage (%)
What mode of internet service do you avail for work?	Dial-up	1	1.9
	Broadband	49	94.2
	Others	2	3.8
What internet bandwidth do you use for your work?	1-5 mbps	31	59.6
	6-10 mbps	16	30.8
	11-15 mbps	5	9.6
What type of bandwidth do you use?	Shared	42	80.8
	Dedicated	10	19.2

Table 10 shows that 94% freelancers are using the broadband internet services for their work with 90.4% having bandwidth speed ranging from 1-10 mbps. Four out of every five freelancers are using shared bandwidth for their operation.

6.5 Motivations of a Freelancer

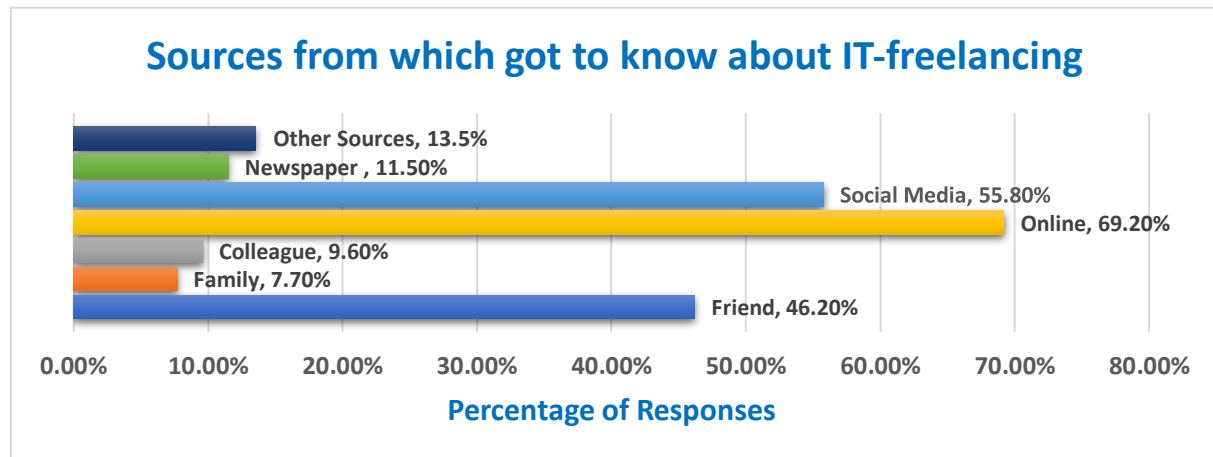


Figure 6: Sources of IT-freelancing information.

According to the survey, among the respondents, the top three popular sources of information regarding freelancing were online platforms, Social media and friends. They have also acquired information from their colleagues, newspaper and other medias.

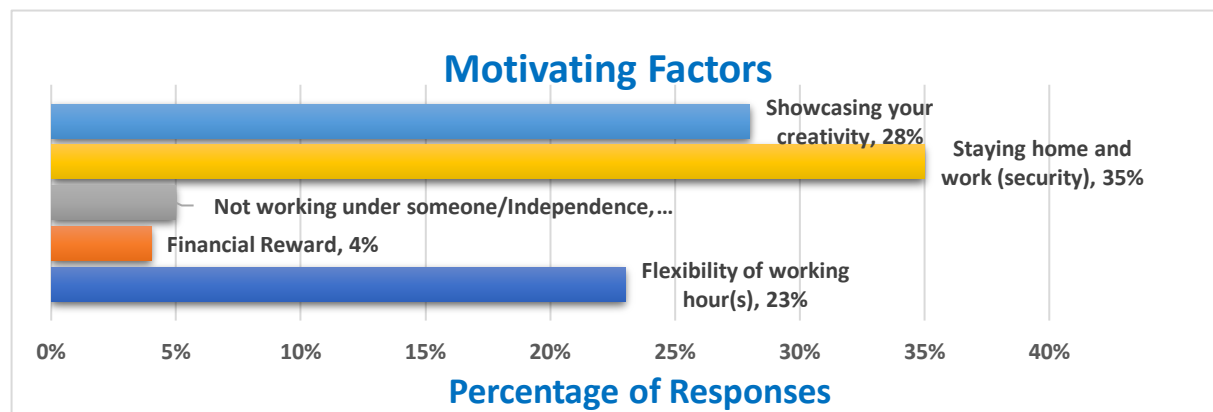


Figure 7: Motivating Factors

Flexibility of working hour(s) along with financial reward, security of working from home and independence at work have motivated most of the observed freelancers to choose freelancing as their preferred profession. Also, 30.8% of them have come into freelancing career to showcase their creativity.

Most of the freelancers are either satisfied or highly satisfied with the compensation they receive from freelancing.

Table 11: Satisfaction with Compensation

	Frequency	Percent
Highly Satisfied	12	23.1
Satisfied	31	59.6
Neutral	6	11.5
Dissatisfied	3	5.8
Total	52	100.0

6.6 Market Analysis

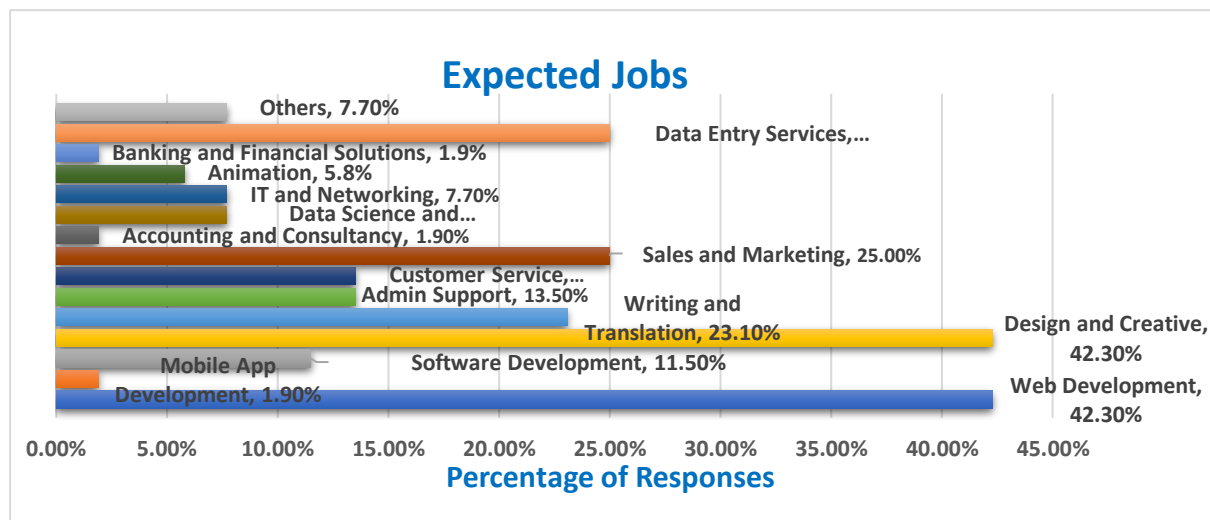


Figure 8: Jobs Sought by the Freelancers.

In most of the cases, freelancers have shown their preference for selected number of areas namely Web Development, Design and Creative, Sales and Marketing, Data Entry Services, Writing and Translation etc. A very marginal number of them have shown versatility in their working portfolios in the areas of Admin Support, Data Science, IT and Networking, Animation as their intended jobs.

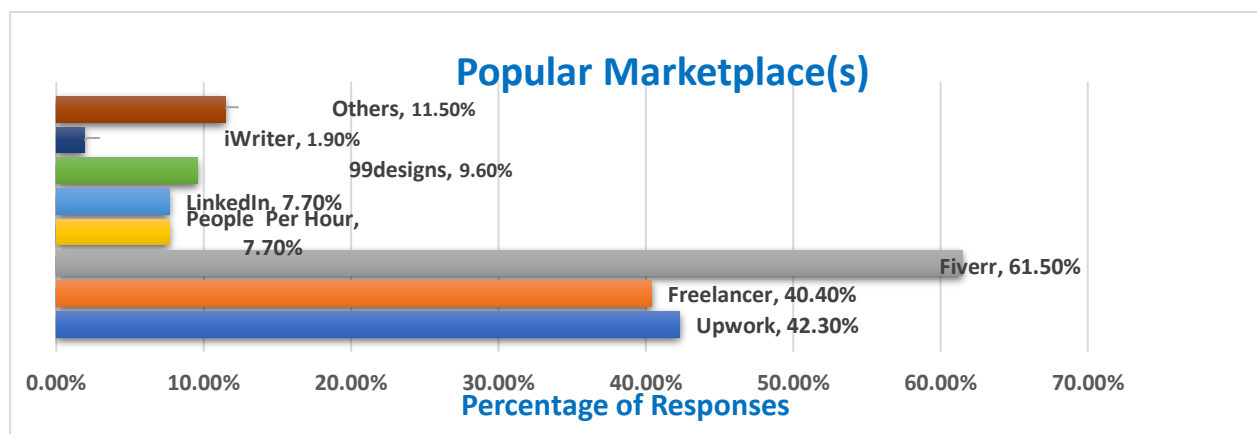


Figure 9: Popular Marketplaces.

Globally popular marketplaces like Fiverr, Upwork, Freelancer are also mostly preferred by the Bangladeshi freelancers with fewer working in the platforms such as 99designs, LinkedIn, People Per Hour.

Table 12: Work Scenarios

Subject	Details Classification	Frequency	Percentage (%)
Does the time zone difference between you and your client in any way hamper your daily life?	Yes	21	40.4
	No	18	34.6
	Neutral	13	25.0
What attribute do you emphasize on while undertaking a work?	Quality of work	26	50.0
	Quickness of completion	3	5.8
	Both	23	44.2
Do you employ other freelancers to work under/with you?	Yes	6	11.5
	No	46	88.5

The daily life of 40.4% of the freelancers are hampered by the time zone difference whereas 34.6% do not face such problem. Quality of work gets priority to 50% of the freelancers and 44.2% stress on both quality and completion of the work.

Table 13: Client and Negotiations Plan

Subject	Details Classification	Frequency	Percentage (%)
Basis of Payment	Hourly	14	26.9
	Job wise	38	73.1
	Contract Basis	32	61.5
	Others	2	3.8
What is the nature of your client/customer?	Local Individual	5	9.6
	Local Organization	4	7.7
	International Individual	36	69.2
	International Organization	7	13.5
What type of clients do you work for?	Same/repetitive client	25	48.1
	Random new client for each job	27	51.9

For the payment basis, majority of them (73.1%) prefer job wise payment. Contract basis payment was the next popular payment basis (61.5%) for them, while a marginal number of them also accept hourly payment for the task completed.

Only a few are working for local individual or organization. For more than 80% freelancers, their clients are international individual or organization. Besides, they work repetitively for same client and also for random new client almost equally.

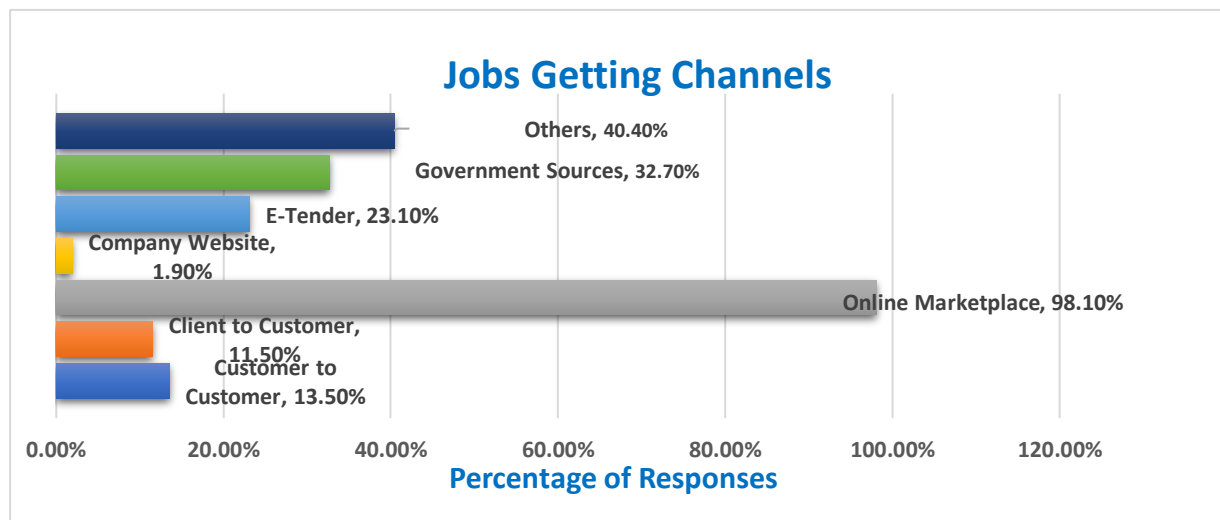


Figure 10: Popular Marketplaces.

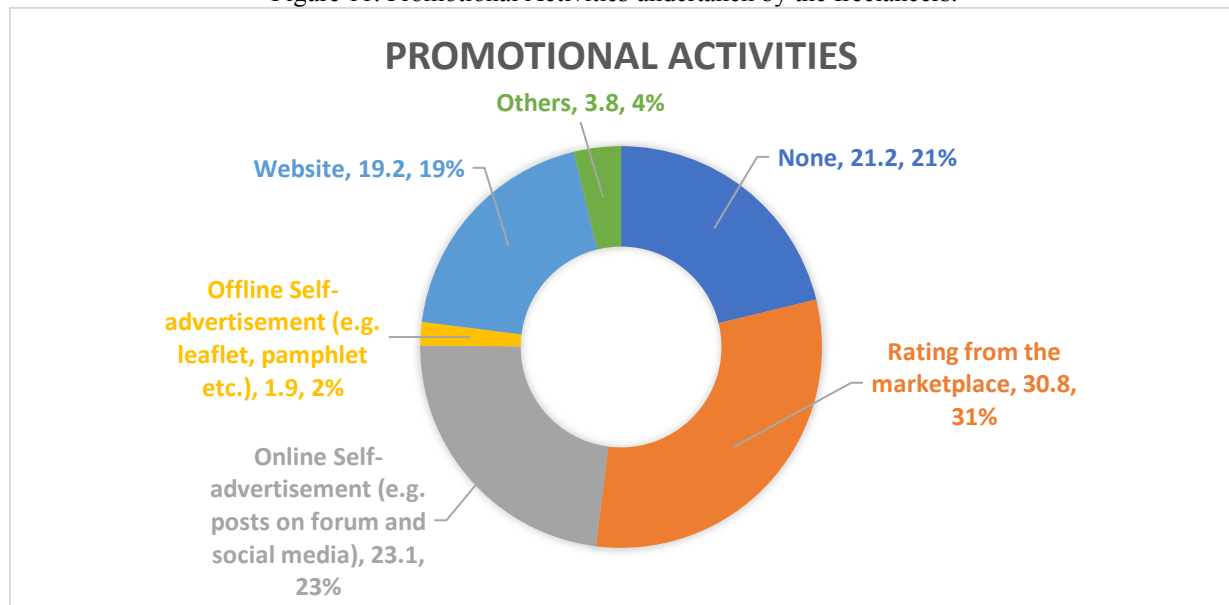
Freelancers have identified online marketplace as their biggest channel of getting job. Besides, they also get jobs through Customer to Customer, Client to Customer channels and Company Websites. On the other hand, Government Sources have been identified as a very insignificant source from where a very fewer number of jobs has been channeled to them.

Table 14: Major Platforms used in the Freelancers-Client Communication.

Communication Platforms	Telephone/Mobile	E-mail	Video Chat/Conference	Written Chat	Through the social media	Others
Frequency	13	39	25	33	19	3
Percentage	25.0%	75.0%	48.1%	63.5%	36.5%	5.8%

Freelancers use telephone/mobile, e-mail, video chat/conference, written chat, and social media in 25.0%, 75.0%, 48.1%, 63.5% and 36.5% respectively.

Figure 11. Promotional Activities undertaken by the freelancers.



For the majority of the freelancers, their promotional activity includes Rating from marketplace, posts on forum and social media, Website and others. 20% have not taken any promotional activity.

6.7 Payment System & Associated Factors

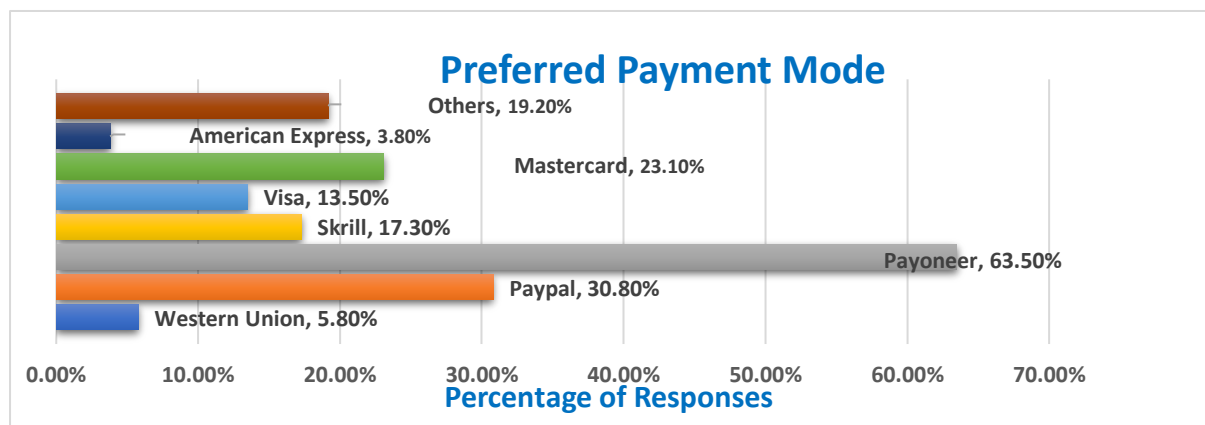


Figure 12: Preferred Payment Modes.

Most of the respondent freelancers prefer Payoneer, Paypal, Mastercard, and Skrill as their payment gateway. Also, a marginal portion of them use other gateways as Visa, Western Union, and American Express etc.

Table 15: Payment Issues

Subject	Details Classification	Frequency	Percentage (%)
Do you think there is element of risk associated with the available payment systems?	Yes	20	38.5
	No	22	42.3
	Neutral	10	19.2
What is the preferred currency of payment for your clients?	USD	47	90.4
	EUROS	1	1.9
	Taka	4	7.7

While 42% of the freelancers do not find any risk associated with the available payment systems, a significant proportion of freelancers (38.5%) have identified the presence of risk factors in the same. Also, most of the freelancers prefer US Dollar as currency of payment with a very small number favoring for the local currency Taka.

6.8 Funding and Cost Issues

The study shows that 86% of the freelancers have initiated their operation with a capital of less than BDT. 50,000. Capital of more than BDT. 50,000 up to BDT. 1,50,000 were used by only 14% freelancers.

Table 16: Investment at Inception

How much capital did you invest at the inception of operation?	Less than BDT. 25,000	37	71.2
	BDT. 25,000-50,000	8	15.4
	BDT. 50,000-75,000	2	3.8
	BDT. 75,000-1,00,000	3	5.8
	BDT. 1,25,000-1,50,000	2	3.8

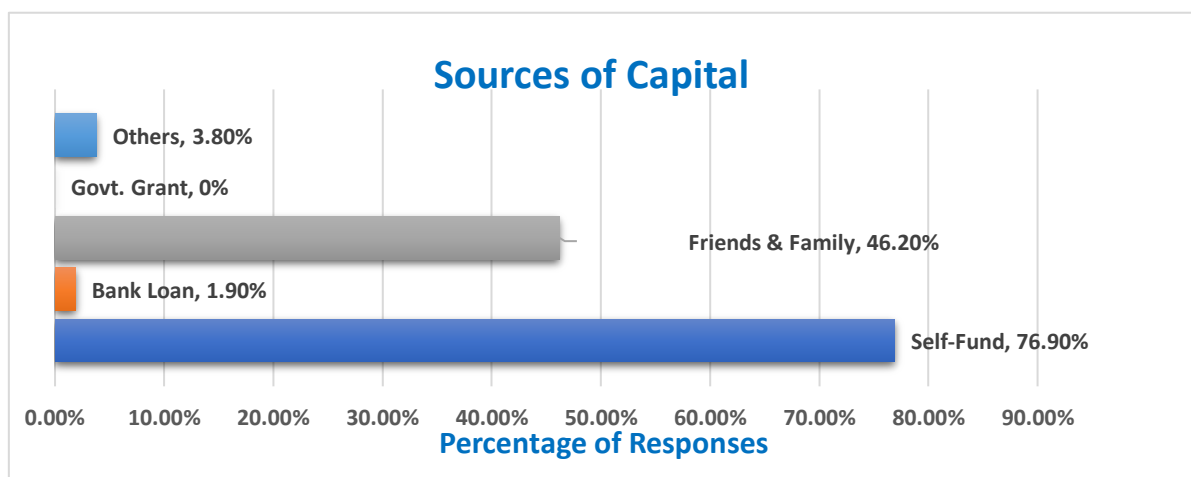


Figure 13: Sources of Capital.

Among the respondents, every two of three freelancers have started their operation with Self fund, while half of them have collected capital from their friends and families. Although, a very few have used Bank Loans and other available sources as their capital source, none of them have received any government grant or loans.

Table 17: Fixed Costs

Subject	Details Classification	Frequency	Percentage (%)
Fixed costs incurred per month for work (e.g. Utilities, Internet bill, Salary to Assistance etc.)	<BDT. 1,000	13	25.0
	BDT. 1,001-2,000	18	34.6
	BDT. 2,001-3,000	8	15.4
	BDT. 3,001-4,000	3	5.8
	BDT. 4,001-5,000	3	5.8
	>BDT. 5,000	7	13.5

For their operation, fixed cost incurred per month is up to BDT. 3000 for 75% of the freelancers.

7. Challenges of Freelancing Business

7.1 Problems and Obstacles Faced by Freelancers

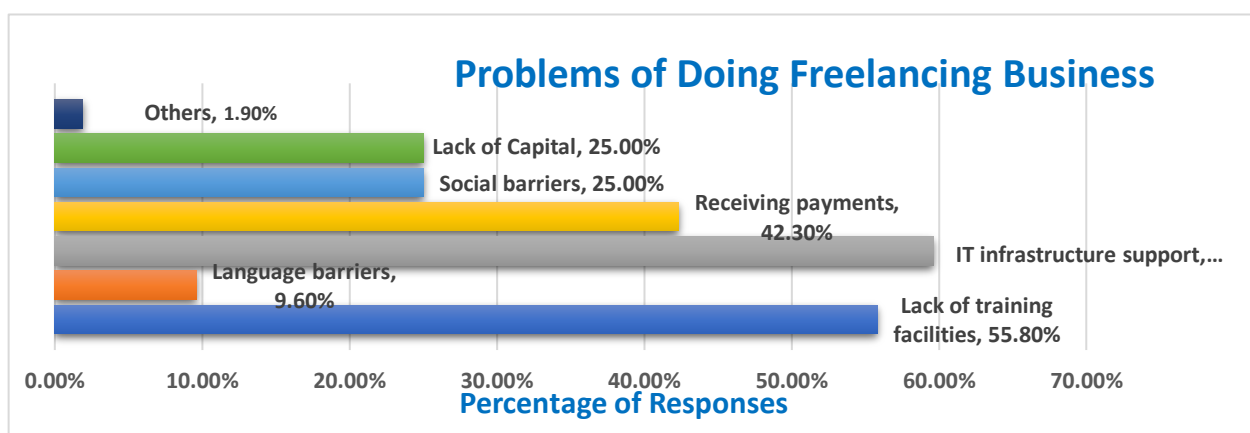


Figure 14: Problems faced while doing freelancing operation.

While initiating their journey as a freelancer, they have observed lack of IT infrastructure support and lack of training facilities as their main barriers. Nearly half of them have also mentioned payment receive related issues as a major problem along with lack of Capital and Social Barriers as impediments at the time of their inception. When asked about the major and minor obstacles of engaging in IT freelancing, the respondents of the survey highlighted the followings:

It was found that the respondents thought –load shedding, cost of obtaining internet, access to finance, lack of overall IT infrastructure, ease of payments, competition at marketplace, obtaining quality certification and work order, social acceptability to be the major obstacles faced everyday by the freelancers. On the other hand, country branding, communication, lack of expertise, government regulation, payment reliability, bias of clients etc. were thought of as minor issues.

7.2 Common Mistakes of the Freelancers

As per the findings of the study, the common mistakes committed by the freelancers while applying for jobs include-

- Applying for wrong job
- Inaccurate application format
- Failing to meet deadline
- Plagiarism
- Having multiple accounts
- Inability in work portfolio design
- Not knowing how to pitch
- Accepting whatever job that are available without having
- Lack of professionalism
- Furnishing false information about skills and expertise
- Having insufficient knowledge about marketplace

- Unable to understand the job details and client demands
- Weak communication skills
- proper skills and budget understanding
- Putting less importance to client reviews

7.3 Pejorative Social Perception about IT-Freelancing

Through the study it was found out that in Bangladesh, society by and large still does not accept independent freelancing to be an honorable profession and career choice. Some pejorative perceptions from both family and society hindered the freelancers moving forward in their career. While some of these perception may have some pragmatic underpinning, most are grounded in lack of knowledge and stereotypical attitude.

From the freelancers participating in the survey, it was found out that some of the following perceptions are held by the people around the freelancers:

- Some people do not even consider freelancing to be a proper job.
- Many people question the legality of freelancing.
- Traditional thinkers often prefer conventional jobs over freelancing due to greater social security.
- Unfortunately, many consider freelancing to be ‘wasting of time’.
- Technicality of the online marketplace and the whole mechanism are not understandable to many.

While these perceptions are held by many people, there are others who welcome this new area of earning positively. They consider this to be a viable profession that can be a sustainable source of income. Also, they consider it to be a very skill-based area of working. Many a times it is seen very positively when students are earning besides their studies through freelancing. All in all, there are still room for improvement regarding the social perception about IT-freelancing as source of income.

8. Words to the New Freelancers

From the study, the following suggestive remarks were extracted from the present freelancers for the ones coming new to the profession:

- First and foremost, fully comply with the standards of marketplaces.
- Develop necessary skill sets first and then go for earning through projects.
- Keep improving by learning new skills.
- Specialize in an area instead of trying to participate in every work category.
- Respect clients’ demand.
- Maintain a balance between quality of work and payment.
- Avoid copying other people’s works.
- Showcase creativity and build trust.
- Make a good portfolio.
- Not compromising in quality of work.
- Collaborate with someone who is already established in the marketplace, if possible.
- Being professional in every step.
- Develop strong communication skill.
- Work with dedication and keep patience.
- Should practice good work ethics.
- Work towards setting a future goal.
- Understand clients’ project properly.
- Remain polite and maintain time table along with professionalism.
- Should remain vigilant about rating provided by the clients, as it narrates one’s work history.

9. Future Needs of the Freelancing Business

Based on the findings of the study, the followings are recommended to address the future needs of IT freelancing sector in Bangladesh:

- Government should take initiatives to train up more young population to incorporate them in IT sector while ensuring greater female participation.
- Necessary infrastructures and environment have to be provided to foster the freelancers to grow as IT entrepreneurs as well as promoting this sector as a promising job source.
- Commencing national awards and recognition by the government for the successful freelancers to motivate more people to come in this sector.
- Establishing more public training facilities across the country focusing on the market demands and future trends to utilize the country demographic dividends and also supporting the private IT institutes and training facilities. These trainings may include building technical expertise in major occupational categories, language & communication skills and soft skills.
- The national portal needs to be more efficient in circulating information regarding freelancing opportunities, new markets, training, government initiatives and other contemporary issues.
- Uninterrupted broadband internet services should be ensured for the freelancers across the country with a higher bandwidth at a subsidized price along with uninterrupted power supply.
- The universal and popular payment gateways should be made available for ensuring secured transactions.
- A separate government fund should be apportioned to provide the necessary capital through the banking channel to support the freelancers in initiating and expanding their operations.
- Government should raise social awareness about this potential sector through campaigns and other publicity tools to remove the social barriers and elevate the social acceptability of the profession.
- Efforts should be exerted to highlight and improve the overall country branding.
- Enforcement of relevant rules and regulations to foster this promising sector.
- Updating the National Policy keeping greater consideration to the IT freelancing activities.
- With collaboration of strategic partners a sustainable IT eco-system should be developed in actualizing the 'Digital Bangladesh' agenda.

10. Conclusion

Despite facing myriad of problems such as lack of financial support, underdeveloped IT infrastructure, social stigma, difficulty in payment etc. Bangladesh has been marching ahead and has already established itself as a potential global freelancing hub. In order to unleash the true potential of the growing IT based freelancing sector, a holistic effort from all the stakeholders is required. Thus, more research and policy discussions should be conducted to find the optimal course of action, keeping focus on the appropriateness of national policy, monitoring of efficiency and progress of government initiatives and so on.

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Comparative Analysis of Financial Sustainability Using the Altman Z-Score, Springate, Zmijewski and Grover Models for Companies Listed at Indonesia Stock Exchange Sub-Sector Telecommunication Period 2014 – 2019

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Abstract

This study aims to compare the best bankruptcy prediction models between Altman, Springate, Zmijewski and Grover models against companies listed on the Indonesian stock exchange in the telecommunications sub-sector for the 2014-2019 period. The purposive sampling method is used to obtain a sample of companies with the following criteria: Companies listed on the Indonesian stock exchange, the telecommunications sub-sector, the company has conducted an IPO in 2010, the company is obedient in reporting annual reports from 2014 - 2019 and the company is free from delisting issues. There are 4 companies that meet the purposive sampling criteria, namely PT. Telkom TBK, PT. Indosat TBK. PT. XL Axiata TBK and PT. Smartfren TBK. The data used in this research is secondary panel data. The results showed that only PT. Telkom which is in a healthy financial condition. Meanwhile, PT. Indosat, PT. XL Axiata and PT. Smartfren is consistently in an unhealthy condition based on the analysis of the Altman and Springate models. The calculation of Zmijewski's model and Grover's model gave inconsistent results. Comparative testing of the four bankruptcy analysis models resulted in the Altman, Springate and Grover models recording accurate results but Altman modelling is the best because it is an accurate, consistent, and tested model both descriptively and statistically.

Keywords: Bankruptcy Prediction Model, Altman, Springate, Zmijewski, Grover, Telecommunication Company

1. Introduction and Background

At the beginning of 2020, the Indonesian telecommunications society was shocked by the emergence of confirmed news where PT. Indosat. TBK (ISAT) scheduled a layoff plan (PHK) with more than 500 employees affected.

In an announcement to employees on Friday (14/02/2020), which was reported by CNBC Indonesia, President Director & CEO of Indosat Ooredoo Ahmad Al-Neama conveyed three vital changes to Indosat Ooredoo's business, namely:

1. Strengthening regional teams so that work is more efficient and is transferred to closeness to customers.
2. Transfer of resources to third parties in the form of such as managed services or back-to-back business.
3. Organizational adjustments, especially in the field of human resources, in order to improve future competitiveness to improve customer satisfaction.

Furthermore, his party believes that this step will improve Indosat's performance, help the company remain competitive amid the challenges of disruption, optimize services, and provide a better experience for customers. "This is a strategic step in making Indosat Ooredoo a leading trusted digital telecommunications company," (Asmara, 2020).

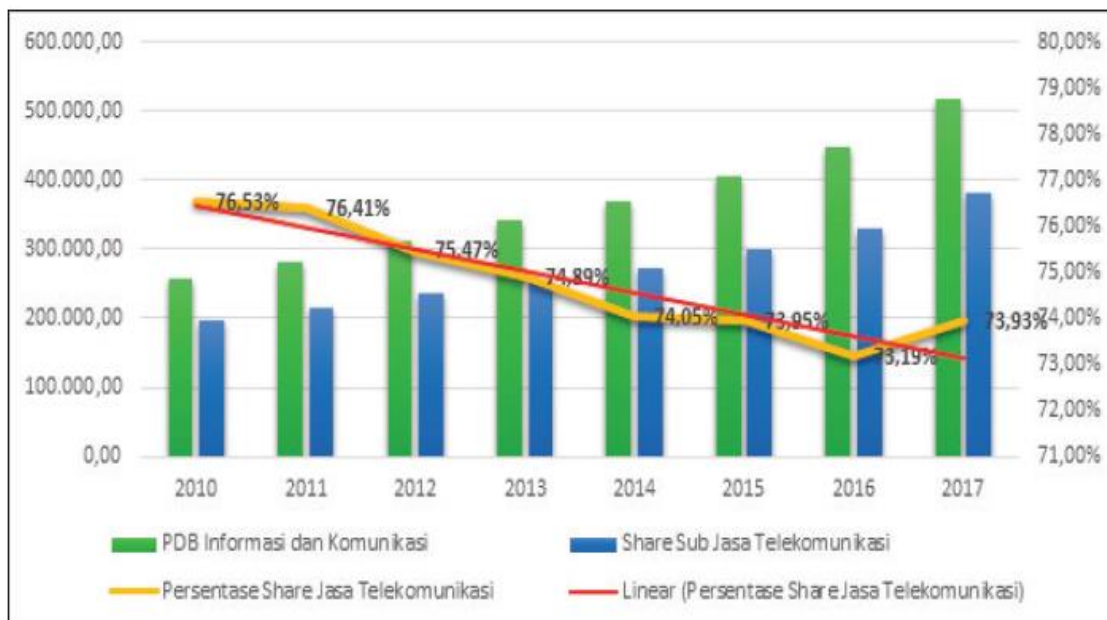


Figure 1: Telecommunication share (BPS 2018)

Sourcing from the publication manuscript of the SDPPI Research and Development team (2018), that based on 2018 BPS data, it can be seen that the telecommunications service sector provides the largest share of GDP in the Information and Communication sector compared to other sectors, with an increasing contribution value in rupiah. However, it seen from the trend, the share of telecommunication services to Information and Communication GDP has decreased. In 2010, the share of the telecommunications services sector reached 76.53%, and experienced a downward trend until 2017. This shows that the growth of telecommunications in Indonesia continues to decline. (Heppy, 2018)

When viewed from the number of users, the development of the Indonesian cellular telecommunications industry is starting to experience saturation: it can be seen from the teledensity of cellular subscribers which reached more than 140% in 2017. The current trend in telecommunications technology has shifted from voice and SMS to data traffic, and has had an impact on revenue growth. operator slowed down even more. In Indonesia, the telecommunications market (voice and data) is contested by several cellular operators, namely PT Hutchison 3 Indonesia (Tri), PT Indosat (Indosat), PT XL Axiata (XL), PT Sampoerna Telekomunikasi Indonesia (Ceria), PT

Telekomunikasi Selular (Telkomsel), PT Smartfren,. The number of telecommunication operators is considered inefficient, taking into account the proportion of the market share of each operator, where 90% of the market share is in the 3 largest cellular operators (Heppy, 2018).

We observed from the Net Profit Margin, the results achieved by telecommunication companies Telkom, Indosat, XL Axiata and Smartfren are reflected in the following figure.

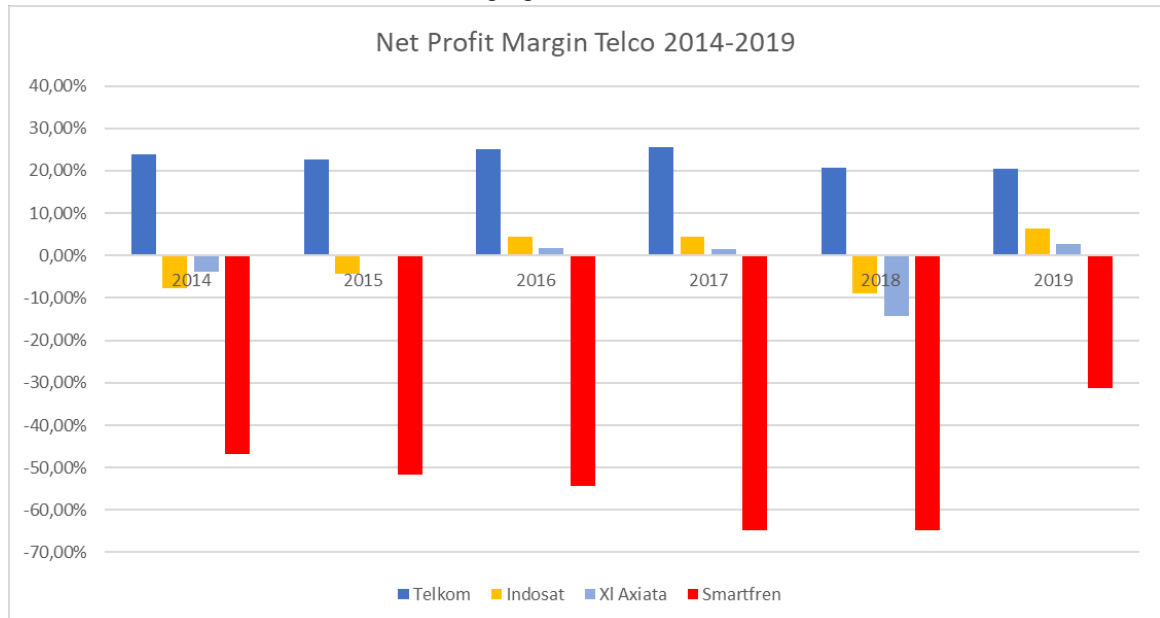


Figure 2: NPM Telco 2014 - 2019

From Figure 2, the percentage value of NPM which is consistently on the positive side is only PT. Telkom, where PT. Smartfren is always in a negative zone and PT. Indosat and PT. XL Axiata has sometimes been in the positive and negative zones and in 2018, both were in quite deep negative zones.

According to Mulyana and Nugroho (2018), Net Profit Margin (NPM) can be interpreted as a measurement of how much net profit is created from every one rupiah of sales achieved. High net profit margin illustrates good efficiency in the company and better management of costs. Conversely, low net profit indicates inefficiencies in cost management that could have been avoided.

PT. Telkom can show consistently positive performance against the background where PT. Telkom is the only state-owned company in a company listed on the Indonesia Stock Exchange in the telecommunications subsector and is involved in the cellular sector through its subsidiary, PT. Telkomsel with a share of 65%.

PT. Telkom, which was founded on July 6, 1965, has a telecommunications network that stretches from Sabang to Merauke and has a source of funding from the government (BUMN), resulting in a well-established network infrastructure and human resources. This is what fundamentally makes the difference between PT. Telkom and other telecommunication companies, namely efficiency and synergy in the use of Capex (Capital Expenditure) and Opex (Operational Expenditure) on infrastructure where PT. Telkom can use the infrastructure that has been built since 1965 while other telecommunication companies have to build new infrastructure or by leasing which of course becomes operational expenses.

Ariyanti (2016) states that based on data from Puslitbang SDPPI in 2015, PT. Telkomsel requires funds of ± 500 million rupiahs for the implementation of 1 e-nodeB where there is a possibility that other telecommunication companies require higher costs because they do not have a strong infrastructure as strong as PT. Telkom to create a new network or lease to a network infrastructure provider.

On the other hand, PT. Telkom also has several subsidiaries that are engaged in various fields, ranging from the telecommunications, property, infrastructure, and goods and services sectors that can maximize potential revenue in the event of a decline in the telecommunications sector (investment diversification).

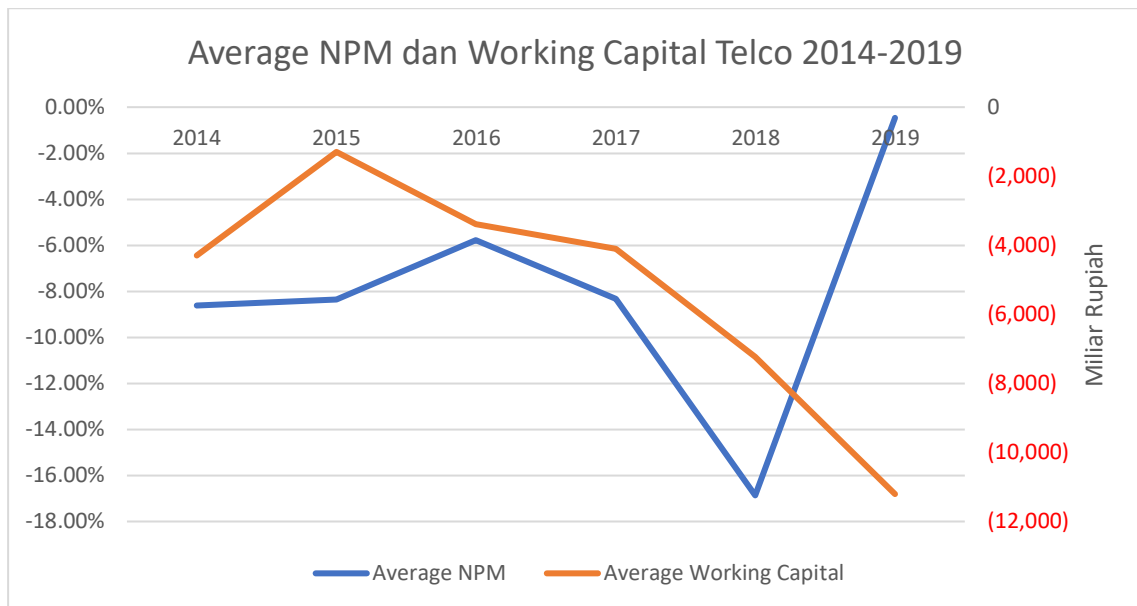


Figure 3: Average NPM and WC Telco

From Figure 3, it can be seen in general that the average net profit margin of telecommunication companies in Indonesia has decreased with an increase occurring in 2019 but it turns out that the average working capital of telecommunication companies has decreased to a level below minus 11 trillion rupiahs, which means that in the operation of telecommunication companies Indonesia relies heavily on short-term debt due to poor profitability. With this downward trend, it becomes a question whether telecommunications companies in Indonesia experience financial distress and whether these companies can survive in the future.

2. Theory and Hypotheses Development

This research uses the grand theory of financial distress with the Bankruptcy Prediction Model (BPM) which uses the Altman model analysis, Springate model analysis, Zmijewski model analysis and Grover model analysis. Middle theory to cover this research is the theory of corporate financial management (Corporate Financial Management) and Applied Theory in this research, especially in Working Capital, Total Asset, Total Sales and EBIT (Earnings Before Interest and Tax) to then get the calculation results of each bankruptcy prediction model analysis.

2.1. Financial Distress

Financial distress is a condition of a company that is experiencing problems in providing its financial needs and can be said to be in an unhealthy financial condition. An example is the difficulty in paying debts or difficulties in financing its operational activities.

Platt & Platt (2002) describe the condition of a company's financial difficulties as a stage of decline in financial conditions that occur before liquidation or bankruptcy occurs. The condition of the company's financial difficulties usually starts with difficulties in fulfilling the company's obligations, especially short-term liabilities, which include liquidity obligations, and also include obligations in the solvency category (solvable).

2.2. Bankruptcy Prediction Model

Prihadi (2016) states that bankruptcy can be interpreted as a company's failure to operate, manage, and earn profits. Bankruptcy can be described as a situation where a company is unable to settle its short, medium and long term obligations.

Copeland and Weston (1988) explain the definition of bankruptcy as described in their book *Financial Theory and Corporate Policy*, namely:

1. Economic Failure

What is meant by economic failure is if the company's income is still insufficient and unable to cover all company expenses.

2. Financial Failure

Financial failure is defined as insolvency, which is a financial condition that cannot be resolved, for example, failure to meet the performance requirements and company benchmarks that have been set, for example, the criteria for the current asset ratio (Quick Ratio) and the current debt ratio (Debt to Asset). Ratio).

From some of the explanations above, it can be concluded that the definition of bankruptcy is a condition in which the company is in a bad financial position and experiences difficulties in carrying out company operations which can result in the company losing business competition and consequently will experience decreased revenue and profits and ultimately cannot achieve company goals.

Arini and Triyonowati (2013) explain that there are four indicator variables that can be used to observe a company's potential level of bankruptcy, namely (1) the level of company profits, (2) effectiveness and efficiency of debt, (3) efficiency of fixed and operational costs and (4) stock returns.

Investors are one of the parties who need bankruptcy predictions from a company because before investors make investment, financial data analysis is needed about how the company's prospects in the future and how it has achieved in the past, so that it can ensure that the investments of investors and investors are on the same path. expected, that is to provide appropriate benefits and returns. This is also in line with the opinion of Wulandari, Burhanuddin and Widayanti (2017) that the level of bankruptcy will have a bad impact and precedent not only on internal companies but also on external parties, in this case investors are also included. Amanah, Atmanto and Azizah (2014) explain in their research where the level of investor interest in the company is directly proportional to the value and return of stock prices. Therefore, the company will always try to maximize and optimize the value of its shares so as to increase investor interest in the company.

In this research, we used four (4) bankruptcy analysis models, namely (1) Altman Z-Score model analysis, (2) Springate S-Score model analysis, (3) Zmijewski X-Score model analysis, and (4) model analysis. Grover-G-Score.

1. Altman Z-Score revision 1995

In Z-Score revision 1995, Altman eliminates the X5 variable (sales to total assets) because this ratio is very varied in industries with different asset sizes.

$$Z = 6,56 X1 + 3,26 X2 + 6,72 X3 + 1,05 X4$$

X1	Working Capital/Total Asset
X2	Retained Earnings / Total Asset
X3	Earning Before Interests and Tax / Total Asset
X4	Book Value of Equity / Book value of Liability
Z	Z-Score Altman rev 1995

Z-Score Scale	Prediction
Z < 1.1	Bankrupt
1.1 < Z < 2.6	Grey Area
Z > 2.6	Not Bankrupt

2. Springate S-Score

Peter and Yoseph (2011) stated that Springate is a bankruptcy prediction model based on G. I. V. Springate's research in 1978, which became known as the Springate Model or Canadian Model. Springate's research in 1978 was made by following the procedure modeled by Altman, namely using a Stepwise Multiple Discriminant Analysis to select four of the nineteen popular financial ratios to distinguish well between a healthy company and a company that was bankrupt (failed).

$$S = 1.03A + 3.07B + 0.66C + 0.4D$$

A	Working Capital/Total Asset
B	Net Profit Before Interest and Tax/Total Assets
C	Net Profit Before Tax / Current Liability
D	Sales / Total Assets
S	Springate S-Score

S-Score Scale	Prediction
S > 0.862	Not Bankrupt
S < 0.862	Bankrupt

3. Zmijewski X-Score

Zmijewski (1984) in his research uses ratio analysis that measures the performance, leverage, and liquidity of a company for his prediction model, Zmijewski also requires one crucial point. The proportions of the sample and the population must be determined from the beginning, to obtain the prediction frequency of the company's financial distress. This frequency is obtained by dividing the number of samples that have gone bankrupt by the total number of samples.

The sample used by Mark Zmijewski amounted to 840 companies, consisting of 40 companies that experienced bankruptcy, 800 companies that did not go bankrupt. Data obtained from the Compustat annual industrial file. Data were collected from 1972-1978. The statistical method used is the same as that used by Ohlson, namely logit regression. By using this method, Zmijewski produced the following model:

$$X = -4,3 - 4,5X_1 + 5,7X_2 + 0,004X_3$$

X1	ROA (Return on Asset)
X2	Leverage (Total Liabilities / Total Asset)
X3	Liquidity (Current Asset / Current Liabilities)
X	Zmijewski X-Score

X-Score Scale	Prediction
X > 0	Bankrupt
X < 0	Not Bankrupt

4. Grover

Grover's model (2001) is a model created by designing and reassessing the Altman Z-Score model. Jeffrey S. Grover used the sample according to the Altman Z-Score model in 1968, adding thirteen new financial ratios.

$$G = 1,650X1 + 3,404X2 - 0,016ROA + 0,057$$

X1	Working Capital / Total Asset
X2	Earnings Before Interest and Taxes / Total Asset
ROA	Return on Asset
G	Grover G-Score

G-Score Scale	Prediction
$G \leq -0,02$	Bankrupt
$G \geq 0,01$	Not Bankrupt

2. 3. Research Framework

This study aims to determine whether telecommunication companies in Indonesia are in good condition or on the contrary, are in a bad condition. For companies that are in bad shape, with the earliest possible detection of potential bankruptcies, managers and top leaders can react to the situation and take strategic steps to restore the situation and improve company performance so that the company can improve and get out of the bankruptcy zone.

As for companies that are in good condition, they can maintain their condition and continuously evaluate their company's performance to ensure that the company's goals remain at the desired rate and can map future needs in the company's winning strategy, in the case of current telecommunications companies, namely the implementation of 5G. and data monetization to further increase company revenue. This study compares the four bankruptcy prediction models, namely the Altman, Springate, Zmijewski and Grover models. To ensure the consistency of the results of the four analysis models and compares the level of accuracy to obtain the model with the highest accuracy for telecommunications companies in Indonesia listed on the Indonesia Stock Exchange over a period of time. 2014-2019.

Based on this, a conceptual framework is made as follows:

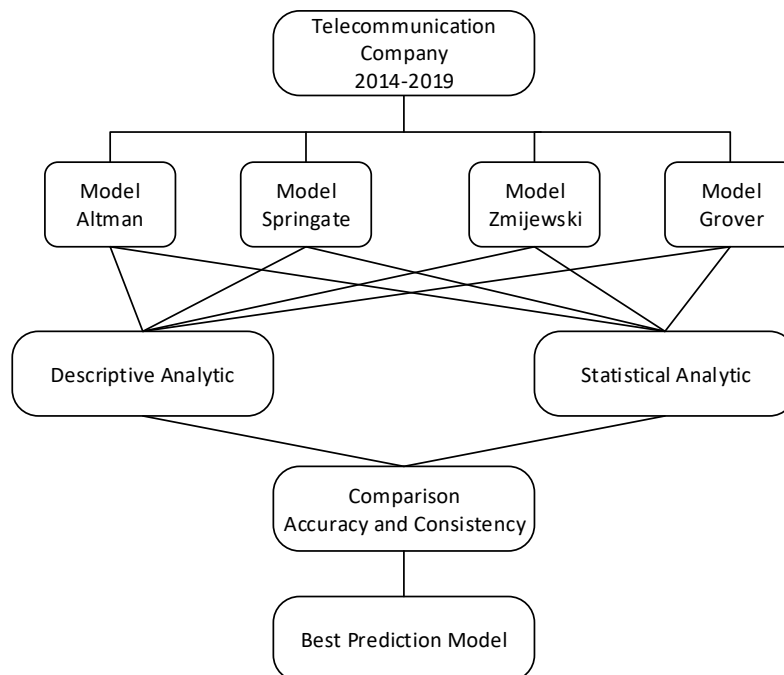


Figure 4: Conceptual Framework

2.4. Hypotheses Development

1. Altman's Model Hypothesis

Research by Fifriani and Santosa (2019) and Nandini et al (2018) states that the revised Altman model can be used to predict the possibility that telecommunications companies are in a healthy state or vice versa in an unfavourable state or bankruptcy.

H1: The revised Altman model can be used to predict the financial distress of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019

2. The Springate Model Hypothesis

Research by Ben, Dzulkirom and Topowijono (2015) states that the Springate model can be used to predict company bankruptcy.

H2: The Springate model can be used to predict the financial distress of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019.

3. Zmijewski's Model Hypothesis

Research by Manalu, Octavianus and Safarina (2017) and Salim (2016) states that the Zmijewski model can be used to predict company bankruptcy.

H3: The Zmijewski model can be used to predict the financial distress of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019

4. Grover's Model Hypothesis

Aminian, Mousazade and Khosko (2016) research on companies listed on the Tehran Stock Exchange, Iran states that Grover's research model shows better results when compared to Altman, Springate and Zmijewski in predicting financial distress.

H4: The Grover Model can be used to predict the financial distress of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019

5. Comparative Hypothesis of the Four Bankruptcy Prediction Models

This hypothesis is proposed to compare the accuracy of the Altman model, the Springate model, the Zmijewski model and the Grover model in predicting the bankruptcy of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019.

H5: There will be one model that is the most accurate among the Altman model, the Springate model, the Zmijewski model and the Grover model in predicting the bankruptcy of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019.

3. Research Methodology

The type of research chosen by the researcher is an ex-facto quantitative approach in which data is collected from various sources to be processed and analysed. The ex-facto method was chosen because the writer used factual data that had already occurred and was audited, and the writer did not have control over the independent variables.

3.1. Population and Sample

According to Sugiyono (2012) population is a whole collection of elements that are similar but different because of their characteristics. The population in this study are all companies listed on the Indonesia Stock Exchange, the telecommunications subsector for the period 2014-2019.

Table 1: Research Population

No	Emitten Code	Emiten Name	IPO
1	ISAT	PT. Indosat Tbk. (d.h. Indonesian Satellite Corporation (Persero) Tbk.)	19-Oct-94
2	TLKM	PT. Telekomunikasi Indonesia Tbk.	14-Nov-95
3	EXCL	PT. XL Axiata Tbk. (d.h. Excelcomindo Pratama Tbk.)	29-Sep-05
4	BTEL	PT. Bakrie Telecom Tbk.	03-Feb-06
5	FREN	PT. Smartfren Telecom Tbk. (d.h. Mobile-8 Telecom Tbk.)	29-Nov-06
6	JAST	PT. Jasnita Telekomindo Tbk.	16-May-19

The sample in Sugiyono (2012) explanation is part of the elements of a population. The sample is part of the population or representative of the population which is seen as representative of the object under study.

The criteria for selecting samples in the object of this study are as follows:

1. Companies listed on the Indonesia Stock Exchange in the telecommunications subsector.
2. Telecommunication sub-sector companies that have IPO in 2010.
3. The company is obedient to reporting annual reports for the 2014-2019 period.
4. The company is free from issues and potential delisting.

Based on the sample selection criteria above, what can be used as a research sample are as follows:

Table 2: Research Sample

No	Emiten Code	Emiten Name	IPO
1	ISAT	PT. Indosat Tbk. (d.h. Indonesian Satellite Corporation (Persero) Tbk.)	19-Oct-94
2	TLKM	PT. Telekomunikasi Indonesia Tbk.	14-Nov-95
3	EXCL	PT. XL Axiata Tbk. (d.h. Excelcomindo Pratama Tbk.)	29-Sep-05
4	FREN	PT. Smartfren Telecom Tbk. (d.h. Mobile-8 Telecom Tbk.)	29-Nov-06

Based on Table 2, the issuer PT. Bakrie Telecom Tbk. (BTEL) was eliminated from the population table due to (1) not being compliant with reporting the annual report and (2) having an issue delisting in 2020. Meanwhile, the issuer PT. Jasnita Telekomindo Tbk. (JAST) was eliminated because it was only IPO in 2019.

3.2. Data Collection

1. Types of Data

Basically, research is an activity of collecting information or data that is very useful to find out something, solve problems, or to develop knowledge. Information that has been scaled is called data.

The type of data used in this study is the type of panel data where the data taken is data from 2 or more telecommunication subsector companies listed on the Indonesia Stock Exchange for the period 2014-2019.

2. Data Collection Techniques

Secondary data is data that comes from research results or other people's presentations which are made for different purposes. Secondary data can also be interpreted as additional data that is not obtained first-hand but second, third or so on.

Because documents are usually written by third parties, such as journalists or screenwriters who are not scientific informants. The data used in the document is of course not first-hand.

Apart from being collected by the owner, secondary data is also collected by other parties, for example banking financial data. The data is of course stored and owned by each bank, but there are other parties that keep the data, for example Bank Indonesia or the Financial Services Authority. Even private institutions such as Infobank and Bisnis Indonesia maintain the data because it is an important commodity.

This study uses secondary data, namely data available on the official website of the Indonesia Stock Exchange (www.idx.go.id) and those on the official pages of each issuer.

3.3. Data Analytic

1. Descriptive Analysis

The technical descriptive analysis in this research can be described as follows:

1. Performing analysis calculations on the research sample using the Altman, Springate, Zmijewski and Grover models.
2. Classifying the calculation results in the first point. The classification is divided into 2, namely companies in a healthy and unhealthy condition. The possibility of classification confusion can arise because the Altman method has three possibilities, namely (1) Healthy, (2) Gray area and (3) Unhealthy. Based on research from Suwitno (2013), it is stated that 93% of companies located in the Gray area do not go bankrupt in the following year. Therefore, we categorize the gray area in an unhealthy condition.
3. Validate the analysis results with the actual conditions of the company.

2. Classical Assumption Test and Hypothesis

The panel data regression model can be said to be a good model if it meets the Best Linear Unbiased Factor (BLUE) criteria. BLUE can be achieved if it fulfils the classical assumptions. The classical assumption tests include normality test, autocorrelation test, multicollinearity test, and heteroscedasticity test. Arikunto (2013) states that not all classical tests must be done because:

1. Linearity test is hardly performed on every linear regression model. Because it has been assumed that the model is linear. Even if it is only done to ascertain and see the degree of linearity.
2. The normality test is basically not a BLUE requirement and some opinions do not require this requirement as something that must be met.
3. Autocorrelation only occurs in time series data. Autocorrelation testing on data that is not timeseries (cross-section or panel data) will be meaningless.
4. Multicollinearity needs to be done when linear regression uses one or more independent variables. If there is only one independent variable, multicollinearity is impossible.
5. Heteroscedasticity usually occurs in cross-section data, where panel data is closer to the characteristics of cross section data than to time series data.

Based on Arikunto (2013), this study will use (1) normality test, (2) multicollinearity test and (3) heteroscedasticity in testing its classical assumptions.

3. Comparison of Descriptive Analysis Results with Statistical Analysis

After the results of descriptive and statistical calculations are obtained, comparisons are made to ensure whether the results obtained in the study are consistent between the results of descriptive analysis and statistical analysis which shows that the modelling can be applied to companies listed on the Indonesia Stock Exchange in the Telecommunications subsector for the period 2014 - 2019.

4. Measurement Accuracy of Bankruptcy Prediction Models

In measuring the accuracy of the bankruptcy prediction model, we compare the results of the prediction model calculations to be compared with the company's Debt to Asset ratio.

The choice of the Debt to Asset ratio is because the DAR ratio is one of the ratios that includes the Solvency ratio which assesses whether a company can meet all its obligations or debts using its assets. The higher the DAR ratio, the higher the probability that the company is in a bad financial condition.

Ross (2019) states that from a risk point of view, DAR with a value below 40% or 0.4 is preferred. And because debt is always correlated with interest rates that are not related to profitability, too much debt can consume cash flow, which in turn leads the company to sell assets to pay debts or declare bankruptcy.

Sean Ross (2019) also said that investors prefer companies with DAR in the range of reference 0.3 (30%) to 0.6 (60%). With the reference from Ross (2019), we use the reference standard of a more conservative DAR ratio of 50% in the hope that the company's financial difficulties can be identified as early as possible and corrective steps can be taken quickly to avoid the possibility of bankruptcy.

5. Selection of the Best Bankruptcy Prediction Model

A bankruptcy prediction model that is consistent in its calculations both statistically and descriptively is then chosen which has the best level of accuracy. Which will then be further analysed descriptively with its relationship to NPM, Working Capital or DAR to get the best prediction results that can be used to predict financial distress conditions in companies listed on the Indonesia Stock Exchange in the Telecommunications subsector for the period 2014 - 2019.

4. Research Analysis

4.1. Descriptive Analytic Result

1. Altman

Altman model analytic result can be seen as follow:

Table 3: Altman Analysis Result

Altman Z-Score	2014	2015	2016	2017	2018	2019
Indosat	-1,419	-1,098	-0,793	-0,194	-1,664	-0,563
Telkom	3,417	3,410	3,493	3,132	2,719	2,068
XL Axiata	-0,024	-0,365	-0,233	-0,256	-0,979	-0,923
Smartfren	-1,891	-0,751	-1,172	-1,166	-0,925	-0,703

From table-3 above, we can observe that of the four companies included in the sample, only PT. Telkom

consistently produces a good Z-Score, is in 2014-2018 and in 2019 it is in the grey zone. For the other three companies, namely PT. Indosat, PT. XL Axiata and PT. Smartfren is consistently in the bankruptcy zone, which should become a concern for the management and top leaders of the company.

2. Springate

Springate model analytic result can be seen as follow:

Table 4: Springate Analysis Result

Springate S-Score	2014	2015	2016	2017	2018	2019
Indosat	-0,236	-0,153	0,177	0,296	-0,318	0,132
Telkom	1,471	1,487	1,591	1,550	1,300	1,122
XL Axiata	-0,065	-0,040	0,013	0,015	-0,279	0,054
Smartfren	-0,581	-0,655	-0,715	-0,726	-0,836	-0,573

From table-4 above, we can observe that of the four companies included in the sample, only PT. Telkom which consistently produces S-Score in the not bankrupt category.

For the other three companies, namely PT. Indosat, PT. XL Axiata and PT. Smartfren is consistently in the bankruptcy zone, which should be a concern for the management and top leaders of the company.

3. Zmijewski

Zmijewski analytic model result can be seen as follow:

Table 5: Zmijewski Analysis Result

Zmijewski X-Score	2014	2015	2016	2017	2018	2019
Indosat	0,043	0,145	-0,287	-0,364	0,302	0,046
Telkom	-2,751	-2,448	-2,676	-2,557	-2,536	-2,135
XL Axiata	0,204	0,037	-0,833	-0,819	-0,234	-0,317
Smartfren	0,464	-0,144	0,325	-0,219	-0,782	-0,867

From table-5 above, we can observe that of the four companies included in the sample, only PT. Telkom which consistently produces X-Score in the not bankrupt category.

For the other three companies, namely PT. Indosat, PT. XL Axiata and PT. Smartfren is fluctuating in a bankruptcy zone which is of course a vigilance for the management and top leaders of the company.

The calculation anomaly is obtained for PT. XL Axiata in the 2018 period, which recorded a negative X1 and X2 which was in the 66% position, which means that it has a debt of 66% of the assets resulting in Zmijewski being in a good position or not bankrupt.

The anomaly is then obtained from calculations for PT. Smartfren where the value of X1 / ROA recorded a negative value throughout the observation period, but the results of the calculation of the Zmijewski model produced in 2015, 2017-2019 are in the category of not bankrupt.

With this anomaly, it is concluded that Zmijewski's analysis model calculations are not suitable for application to telecommunications companies in Indonesia.

4. Grover

Grover model analytic result can be seen as follow:

Table 6: Gover Analytic Result

Grover G-Score	2014	2015	2016	2017	2018	2019
Indosat	-0,457	-0,354	-0,181	-0,032	-0,521	-0,112
Telkom	0,764	0,821	0,851	0,804	0,632	0,514
XL Axiata	-0,051	-0,136	-0,162	-0,165	-0,450	-0,253
Smartfren	-0,631	-0,427	-0,514	-0,596	-0,654	-0,489

From table-6 above, above, we can observe that of the four companies included in the sample, only PT. Telkom which consistently produces G-Score in the not bankrupt category.

For the other three companies, namely PT. Indosat, PT. XI Axiata and PT. Smartfren is consistently in the bankrupt zone, which is a concern for the management and top leaders of the company.

4.2. Classic Assumption and Hypothesis Testing

The classical assumption test is used as a preparation for conducting statistical tests in this study, where in this research will make comparisons to the analysed model using two methods, namely statistical methods and descriptive methods. The following classical statistical assumption tests use SPSS software as one of the tested software for use in statistical analysis in scientific research.

A. Normality Test

The normality test in this study used the Shapiro Wilk method which was obtained through SPSS software. The variables used as input for the normality test process come from the calculation results of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019 for each analysis model, namely the Altman, Springate, Zmijewski and Grover models. So that we get 96 input data.

The results of the calculation of the Shapiro Wilk normality test are as follows:

Table 7: Shapiro-Wilk Normality Test

Perusahaan		Tests of Normality		
		Statistik	df	Sig.
Altman	Indosat	0,982	6	0,959
	Telkom	0,839	6	0,127
	XL Axiata	0,861	6	0,193
	Smartfren	0,780	6	0,038
Springate	Indosat	0,912	6	0,450
	Telkom	0,931	6	0,589
	XL Axiata	0,811	6	0,073
	Smartfren	0,934	6	0,610
Zmijewski	Indosat	0,944	6	0,688
	Telkom	0,917	6	0,484
	XL Axiata	0,907	6	0,420
	Smartfren	0,915	6	0,473

Grover	Indosat	0,936	6	0,629
	Telkom	0,870	6	0,227
	XL	0,890	6	0,320
	Axiata			
	Smartfren	0,941	6	0,665

In the normality test, it is stated that good data is data that is normally distributed, where data that is normally distributed usually has a significance (Sig) > 0.05. In table-7 above, we can observe that there is only 1 data that is below 0.05, namely the Sig value of PT. Smartfren for Altman analysis. However, because the resulting value is the actual calculation result, the research is continued.

We also examines more about the significance value of PT. Smartfren below 0.05, when we tries to ignore the value calculated by PT. Telkom, then the significance value of PT. Smartfren becomes above 0.05. From this result, we concluce that the statistical data assumes anomalies occur in the PT. Smartfren for Altman analysis due to the variations that are too far when compared with the calculation results of PT. Telkom.

B. Multicollinearity Test

The multicollinearity test is intended to determine whether there is multiple collinearities in the research results. The parameter used is if the tolerance is above 0.10 and the VIF is below 10, then the data is declared good and can be used in statistical regression research.

The results of statistical calculations for the multicollinearity test in this study are presented as follows:

Table 8: Multicollinearity Test

Model	Coefficients ^a					Collinearity Statistiks	
	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Tolerance	VIF
	B	Std. Error	Beta				
1 (Constant)	3,062	0,425		7,203	0,000		
Indosat	0,097	0,618	0,043	0,156	0,877	0,422	2,367
Telkom	-0,267	0,149	-0,488	-1,796	0,088	0,427	2,340
XL	0,611	0,781	0,174	0,782	0,444	0,640	1,562
Smartfren	0,315	0,640	0,125	0,492	0,629	0,489	2,044

a. Dependent Variable: BPS

From table-8, we can see that the tolerance value from the BPS calculation results for Indosat, Telkom, XL Axiata and Smartfren are all below 0.10 and the VIF value from the BPS calculation results is not greater than 10 so that the regression analysis can be used and can be proceed further.

C. Heteroscedasticity Test

In heteroscedastic testing, we used the Glejser method, which obtained the following results:

Table 9: Heteroscedasticity Test

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	1,099	0,206		5,346	0,000
Indosat	-0,106	0,299	-0,113	-0,356	0,726
Telkom	0,076	0,072	0,332	1,053	0,305
XL	0,472	0,378	0,321	1,249	0,227
Smartfren	0,538	0,310	0,511	1,737	0,099

a. Dependent Variable: RES2

From table-9 above we can observe that the significance value for the variable calculation analysis of the Altman, Springate, Zmijewski and Grover models for Indosat, Telkom, XL Axiata and Smartfren has a significance value above 0.05 so that the independent variable is heteroscedasticity and can be continued for regression calculations furthermore.

D. Independent Variable Test (t-test)

In performing the T test, the T Table value for this study was found to be 2.09302 which will then be compared with the results of the SPSS calculation as follows:

Table 10: t-test result

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
1 (Constant)	1,008	0,079		12,756	0,000
Altman	0,365	0,145	1,470	2,528	0,020
Springate	0,616	0,270	1,113	2,283	0,034
Zmijewski	0,020	0,107	0,050	0,187	0,854
Grover	-1,342	0,686	-1,552	-1,956	0,065

a. Dependent Variable: Kinerja

i. Altman Hypothesis Statistical Testing

In the T test value of the Altman variable, it was found that the significance of 0.020 was less than 0.05 and the t value of 2.528 was greater than the t table value so that the H1 hypothesis was accepted, namely "Revised Altman Model can be used to predict the financial distress conditions of telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019".

ii. Springate Hypothesis Statistical Testing

In the T test value of the Springate variable it was found that the significance was 0.034 which was smaller than the significance limit of 0.05 and the t value of 2.283 was greater than the t table value so that the H2 hypothesis was accepted, namely "The Springate Model can be used to predict the financial condition of the company's distress. telecommunications listed on the Indonesia Stock Exchange for the period 2014-2019".

iii. Zmijewski Hypothesis Statistical Testing

In the T test value of the Zmijewski variable, it was found that the significance of 0.854 was greater than the significance limit of 0.05 and the t value of 0.187 was smaller than the t table value so that the hypothesis H3 was rejected so that it became "Zmijewski's model cannot be used to predict financial distress. telecommunications companies listed on the Indonesia Stock Exchange for the period 2014-2019".

iv. Grover Hypothesis Statistical Testing

In the T-test value of the Grover variable, it was found that the significance of 0.065 which is greater than the significance limit of 0.05 and the t value of -1.956 which is smaller than the t table value causes the H4 hypothesis to be rejected so that it becomes "Grover's model cannot be used to predict financial conditions. distress of telecommunication companies listed on the Indonesia Stock Exchange for the period 2014-2019".

v. The Best Hypothesis Statistical Testing is based on the Comparison of the T test

In table-10, we can see that the results of the Altman model analysis have a t value of 2.528 which is higher than the other models so that H5 is accepted, namely "There will be one model that is the most accurate among the Altman model, the Springate model, the Zmijewski model and the Grover model. predict the bankruptcy of telecommunication companies listed on the Indonesia Stock Exchange for the period 2014-2019".

E. Overall Significance test (f-test)

In the F test analysis, the F table value of 2.87 is obtained which will then be compared with the results of the SPSS to determine whether these independent variables have a simultaneous effect on company performance.

The F test analysis table through SPSS can be seen as follows:

Table 11: f-test result

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,240	4	1,060	77,410	.000 ^b
	Residual	0,260	19	0,014		
	Total	4,500	23			

a. Dependent Variable: Kinerja

b. Predictors: (Constant), Grover, Zmijewski, Springate, Altman

From table-11 above, it is found that the calculated F value of 77.410 is higher when compared with the F table so it can be concluded statistically that the analysis of Altman, Springate, Zmijewski and Grover models has a positive effect simultaneously on the company's performance appraisal so that it can be used in research conditions of a financial distress against telecommunications companies in Indonesia.

Comparative Analytic between Descriptive and Statistical result

In the analysis of the hypothesis statistical testing, we found that:

- a) The Altman model can be used to predict the company's financial difficulties at telecommunications companies in Indonesia.

- b) The Springate model can be used to predict the financial difficulties of companies in telecommunications companies in Indonesia.
- c) The Zmijewski model cannot be used to predict the financial distress of companies in telecommunications companies in Indonesia.
- d) The Grover Model cannot be used to predict the financial difficulties of companies in telecommunications companies in Indonesia.
- e) Altman is the best model to use in predicting the financial difficulties of telecommunications companies in Indonesia.

Accuracy of Measurements

In measuring the accuracy or accuracy of the company's bankruptcy prediction model compared to the binary condition, namely if $DAR > 50\%$ is in a bad financial condition and if $DAR < 50\%$ then the company is in good financial condition, we get results that can be seen in the table as follows:

Table 12: Accuracy of Measurements

Prediction Model	Sample	Accurate	Not Accurate	Accuracy Ratio
Altman	24	24	0	100%
Springate	24	24	0	100%
Zmijewski	24	14	10	58%
Grover	24	24	0	100%

In table-12 we can see that only the Zmijewski model has a low accuracy of 58% and this is in accordance with the descriptive and statistical research results in the discussion of the previous sub-chapter which states that the Zmijewski model may not be suitable if used in predicting the company's financial difficulties.

Best Bankruptcy Prediction Model

From the four bankruptcy prediction models, based on the analysis results in previous chapter, it is concluded that Altman is the best bankruptcy prediction model in predicting the company's financial distress with the highest t-test value.

Descriptive analysis also shows that Altman is the best prediction model because in addition to being consistent and accurate, Altman's prediction model is the only prediction model that gives Telkom a gray zone rating, which is indicated by a negative working capital value. and a fairly high decline in the value of working capital in 2019.

Table 13: Best Bankruptcy Prediction Model Comparison

Altman Z Score	2014	2015	2016	2017	2018	2019
Indosat	-1,419	-1,098	-0,793	-0,194	-1,664	-0,563
Telkom	3,417	3,410	3,493	3,132	2,719	2,068
XL Axiata	-0,024	-0,365	-0,233	-0,256	-0,979	-0,923
Smartfren	-1,891	-0,751	-1,172	-1,166	-0,925	-0,703

Springate S-Score	2014	2015	2016	2017	2018	2019
Indosat	-0,236	-0,153	0,177	0,296	-0,318	0,132
Telkom	1,471	1,487	1,591	1,550	1,300	1,122
XL Axiata	-0,065	-0,040	0,013	0,015	-0,279	0,054
Smartfren	-0,581	-0,655	-0,715	-0,726	-0,836	-0,573

Zmijewski X-Score	2014	2015	2016	2017	2018	2019
Indosat	0,043	0,145	-0,287	-0,364	0,302	0,046
Telkom	-2,751	-2,448	-2,676	-2,557	-2,536	-2,135
XL Axiata	0,204	0,037	-0,833	-0,819	-0,234	-0,317
Smartfren	0,464	-0,144	0,325	-0,219	-0,782	-0,867

Grover G-Score	2014	2015	2016	2017	2018	2019
Indosat	-0,457	-0,354	-0,181	-0,032	-0,521	-0,112
Telkom	0,764	0,821	0,851	0,804	0,632	0,514
XL Axiata	-0,051	-0,136	-0,162	-0,165	-0,450	-0,253
Smartfren	-0,631	-0,427	-0,514	-0,596	-0,654	-0,489

NPM	2014	2015	2016	2017	2018	2019
Indosat	-7,80%	-4,35%	4,37%	4,35%	-9,01%	6,26%
Telkom	23,91%	22,75%	25,08%	25,50%	20,63%	20,35%
XL Axiata	-3,80%	-0,11%	1,76%	1,64%	-14,37%	2,84%
Smartfren	-46,77%	-51,74%	-54,28%	-64,75%	-64,71%	-31,31%

Working Capital (Billion IDR)	2014	2015	2016	2017	2018	2019
Indosat	(12.557)	(10.134)	(11.013)	(6.721)	(13.134)	(9.685)
Telkom	1.976	12.499	7.939	2.185	(2.993)	(16.647)
XL Axiata	(2.088)	(5.596)	(7.670)	(8.046)	(8.675)	(14.147)
Smartfren	(4.499)	(1.951)	(2.806)	(3.841)	(4.126)	(4.345)

In Table-13 working capital section, it can be seen that PT. Telkom has experienced a decrease in working capital where in 2014-2017 it has positive working capital, with the highest in 2015 (working capital 12 Trillion IDR) being negative in 2018 (- 2.9 T) and 2019 (-16.6 T).

The decrease in working capital to the lowest level is certainly a warning to the top management of PT. Telkom so as not to follow the trend of other telecommunication companies (PT. Indosat, PT. XL Axiata and Smartfren) which had negative working capital during the observation period.

Management Implications

Net Profit Margin, which is the profitability ratio, shows how much profit you get from sales. Setiawati and Lim (2016) state that profitability affects firm value. The higher the level of profitability, the higher the company's ability to increase sustainable growth and increase share prices that will attract investors. High Net Profit Margin also allows companies to improve the welfare of their employees through bonus distribution or salary increases.

Morshed (2020) argues that working capital greatly influences the company's profitability. Negative working capital means that the company in carrying out its operational activities relies on short-term debt. And the profit obtained from these operational results will certainly be reduced due to having to pay interest on short-term debt. A negative net profit margin value accompanied by negative working capital will worsen company performance because there is no profit that can be used to pay current debts.

Some of the management implications that arise including:

1. Negative and low Net Profit Margin results in the scale value of the Altman and Springate models which are in bad financial conditions, which can be used as a reference by the management of PT. Indosat, PT. XL Axiata and PT. Smartfren in doing short- and long-term planning. Companies must focus on getting a good net profit margin (~ 20% according to observations on PT Telkom) and sustainable so that they can develop positively without being burdened by ineffective operating costs and short-term and long-term obligations. Rational steps that can be taken include streamlining the organization, selling assets, emphasizing the principle of prudence in expansion, investment and increasing sales effectiveness.
2. Consistent research results through the Altman and Springate models to PT. Indosat, PT. XL Axiata and PT. Smartfren (in an unfavourable financial condition) must be immediately followed up with concrete steps so that these companies can immediately rise up and achieve positive results. Without concrete steps and taking steps to rationalize it, it is not impossible for PT. Indosat, PT. XL Axiata and PT. Smartfren will follow in the footsteps of PT. Bakrie Telekom is currently in a "suspended animation" condition.
3. Management of PT. Telkom must immediately respond to the drastic reduction in working capital in 2019 (which resulted in PT. Telkom entering the grey zone of the Altman model) with tangible, efficient and sustainable steps so as not to follow the pattern of other telecommunications companies, namely negative working capital throughout the observation year. of course, be the first step in the company's financial difficulties.

Conclusion and Recommendation

Conclusion

Based on the research results, it is concluded that of the four telecommunications companies listed on the Indonesian stock exchange for the 2014-2019 period, only PT. Telkom which is in a healthy financial condition. PT. Indosat, PT. XL Axiata and PT. Smartfren, all three are consistently in an unhealthy condition based on the results of the analysis of the Altman and Springate models.

The calculation of Zmijewski's model and Grover's model gave inconsistent results. When comparisons were made between the four bankruptcy analysis models, Altman, Sprigate and Grover recorded accurate results, but we only recommend the analysis results from Altman because it is an accurate, consistent, and tested model both descriptively and statistically.

The results of this study can certainly be of concern to the government where apart from PT. Telkom, which is a state-owned company, the 3rd telecommunications network provider including the private sector is in a bad condition.

If the private sector in telecommunications is reduced or lost, then the losers are the customers because with reduced competition there will be a monopoly on prices and services which results in the lack of choices provided by the telecommunications sector.

In addition, if the private sector is reduced, this will have an impact on the thousands or tens of thousands of employees who are part of the private sector.

PT. Bakrie Telecom as in Kokyung and Khairani's (2013) research can be a good benchmark for comparison, where Kokyung conducted research in 2013 and in 2020 PT. Bakrie Telecom is operationally gone and is waiting for delisting or liquidation.

Net Profit Margin, which is the profitability ratio, shows how much profit you get from sales. Setiawati and Lim (2016) state that profitability affects firm value. The higher the level of profitability, the higher the company's ability to increase sustainable growth and increase share prices that will attract investors. High Net Profit Margin also allows companies to improve the welfare of their employees through bonus distribution or salary increases.

Recommendation

1. Advice for Telecommunication Company Management in general.

Our research resulted in a negative and decreasing pattern of the company's working capital value. This indicates that in their operations, telecommunication companies in Indonesia depend on short-term loans. Negative working capital accompanied by a negative or small Net Profit Margin can cause a chain reaction that causes the company to be in a circle of bad financial conditions and difficulty in recovering, as in the proverb, dig a hole to close the hole.

In this case we suggest to carrying out effective and selective operational activities in terms of expansion, adding assets and in terms of planning, planning new products to be flexibly adapted to the circumstances.

2. Advice to Government

The government as a regulator is also obliged to actively encourage mutually beneficial competition between telecommunications companies and with customers, in this case the people.

According to our opinion, the government can do what is based on article 33 of the UUD45 (Indonesian Constitution) which states that the lives of many people are managed by the government, in this case the government may issue regulations on interconnection networks that can be utilized by PT. Indosat, PT. XL Axiata and PT. Smartfren effectively and encourages positive business growth.

Another thing is the adjustment of telecommunication upper and lower tariffs and the setting of internet tariffs whereas we know, 4G services encourage large data usage and it seems that this has not been felt by PT. Indosat, PT. XL Axiata and PT. Smartfren which is depicted from the results of the bankruptcy analysis that is in unfavourable condition.

3. Suggestions for Future Researchers

In 2020, research methodologies using machine learning and artificial intelligent can open up the possibility of research methods that are more modern, comprehensive and can be used across industries.

The limitation of the author at this time is that we only use the Multivariant Discriminant Analysis (MDA) model such as Altman, Springate, Zmijewski and Grover with a span of only 6 years.

In line with Qu, Quan, Minglong & Shi (2020), we suggest that further researchers conduct research on comparisons between the MDA model (Altman and Springate) with the Deep Belief Network (DBN) and Convolutional Neural Network (CNN) models with a longer period. and make predictions for the next 5 years, so that a prediction model that is relevant for now and with the right expectations can be used not only to predict the condition of the company's financial difficulties, but also to be able to find out the true "disease" in the company so that "the drugs" used are effective and can lead the company to recover and become a company that has good finances and continues to grow.

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TMT Characteristics and Organizational Performance in a Regulatory Setting in Kenya

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Abstract

Some previous studies in organizational performance have illustrated that top management team (TMT) characteristics have the ability to lead to more practical strategic decisions, better creativity, value adding innovations and to assist organizations to engage with diverse stakeholders that in effect positively impact on organizational performance. The specific objectives of the study were; to determine the effect of top management team demographic characteristics, to examine the effect of top management team psychological characteristics and to assess the effect of top management team cognitive characteristics on organizational performance of the independent regulatory agencies in Kenya. To achieve these objectives, the study adopted descriptive cross-sectional research design. The target population of the study was all the twenty-three independent regulatory agencies currently existing in Kenya. Due to the uniqueness of each independent regulatory agency and the distinct roles played by each top management team member in their organization, the study adopted a census survey of all the top management team members in all the twenty- three independent regulatory agencies in order to capture the required information. Primary data was gathered using structured questionnaire administered through drop and pick later method. Descriptive statistics was then used to summarize the survey data into percentages, frequencies, means and standard deviations. Inferential statistics employed regression analysis to test hypotheses and draw conclusions. The findings of the study showed that there is no significant effect of top management team demographic characteristics on organizational performance. The findings further showed that top management team psychological characteristics significantly affect organizational performance. Lastly, the findings established that top management team cognitive characteristics significantly affect organizational performance. The study recommends that the recruitment process of TMTs should include psychological and cognitive characteristics as requirements apart from the normal demographic characteristics requirements mostly in use.

Keywords: Top Management Team Characteristics, Independent Regulatory Agencies, Organizational Performance

1.0. Introduction

There has been growing concern amongst strategic management researchers and practitioners alike to endeavour to understand reasons that lead to some organizations achieving superior organizational outcomes than others even

if they are operating in the same or similar business environments (Ogollah, Bolo & Ogutu, 2011). Some previous studies in organizational performance have illustrated that top management team (TMT) characteristics have the ability to lead to more practical strategic decisions, better creativity, value adding innovations and to assist their organizations to engage with their diverse stakeholders that in effect positively impact on their organizational performance (Mutuku, K'Obonyo, & Awino, 2013). The upper echelons theory posits that in considering internal and external factors of the organization in their strategic decision making processes, top management teams (TMTs) act as filtering mechanisms, interpreting the data through their own cognitive bases and values. Thus, the top management team members' education, functional backgrounds, age, gender, psychological traits, and work experience are important, as these characteristics are the primary influencers of each individual's cognitive standing, values and biases (Raes, Heijltjes, Glunk & Roe, 2012). According to Cannella, Park and Lee (2008), the belief that TMT characteristics significantly affect organizational performance is widespread among strategic management scholars and practitioners while previous studies on the subject have yielded inconsistent results. Some previous researches have reported positive relationships (Norburn & Birley, 1988; Eisenhardt & Schoonhoven, 1990), while others have depicted negative relationships (Simons, Pelled, & Smith, 1999) and others showing no relationship (West & Schwenk, 1996).

Top Management Team (TMT) members are the highest-ranking officials in any organization. The titles of the TMT members however vary from one organization to another depending on the nature of business, scope of operation, organizational culture and ownership of the organizations among other factors. The common titles however among the TMTs are chairman/chairperson, president, chief executive officer, managing director, executive directors, and executive vice presidents among others. These positions are responsible for their entire organizations or departments, divisions and units within the organizations (Oketch & Kilika, 2017). Top management teams translate policies formulated by the board of directors of their organizations into goals, objectives, strategies and projects or programs meant to steer their organizations to success in both the present and the future. They make decisions that affect critical processes within their organizations and therefore navigate these organizations to either successes or failures (Pearce & Robinson, 2011).

Top management team characteristics refer to unique personal traits ascribed to members of the TMT that are either inborn or acquired, noticeable or perceptible. They are predictors of the worth of the TMT members in carrying out their tasks and managing their organizations (Oketch, Kilika & Kinyua, 2020). Previous scholars have grouped top management team characteristics into three categories namely, demographic characteristics, cognitive characteristics and psychological characteristics (Kasomi, 2015). Demographic characteristics are the observable or readily detectable features such as age, gender, education level, functional backgrounds and tenure. Psychological characteristics refer to subjective attributes such as personality traits and personal attitudes and beliefs such as self-esteem, self-efficacy, locus of control, emotional stability, task specific self-efficacy, optimism and resilience. Cognitive characteristics are associated with the ability of the TMT member to learn, remember, problem-solve and pay attention as they carry out their organizational tasks (Kinuu, 2014).

Superior organizational performance is the most sought after outcome by all organizations be they public, private, national or multi-national, profit or non-profit organizations (Oketch, Kilika & Kinyua, 2020). However, the definition of organizational performance remains to be a prickly subject among strategic management circles with various scholars and practitioners defining organizational performance differently (Kasomi, 2015). Javier (2002) while contributing to the subject defined organizational performance in terms of economic, efficient and effective utilization of organizational resources in its activities. This is closer to what Daft (2000), suggested by postulating organizational performance to be the capacity of the organization to realize its objectives and attain its goals through utilizing its assets in a proficient and appropriate way. Ricardo and Wade (2001), in their argument viewed organizational performance as the capability of an organization to maximize on its strengths while overcoming its weakness and to neutralize its threats while taking advantage of opportunities in order to achieve its objectives and goals.

Independent regulatory agencies in Kenya are a special category of state corporations with oversight role over their sectors or sub-sectors. They license operators, set prices where necessary, protect consumers, enforce compliance to licence conditions and market rules, enforce standards as well as codes of practice for their particular

industry. They are meant to spur growth and improve services to consumers or end-users of the services in their particular industries. Currently there are twenty three (23) independent regulatory agencies in Kenya although there are plans to merge some of them so as to make them more efficient and effective. The management of the independent regulatory agencies in Kenya is bestowed on their board of directors and top management teams. Selection and identification of the top management teams with the requisite characteristics for each regulatory agency has been identified as an aspect that affects their performance (PTRP, 2013). Previous studies on performance of state corporations in Kenya have identified that some top management teams are deficient of appropriate talents that can enable implementation of suitable strategic management practices that could positively influence the performance of their organizations. Some of the top management teams have also been associated with failure of their organizations to align themselves to their ever changing and demanding business environments (Mkalama, 2014). The variation in the performance of the independent regulatory agencies have also been attributed to several other factors like; utilization of resources, poor identification of stakeholders and their needs, lack of sufficient resources, in appropriate organization structures and weak corporate governance structures (Ongeti, 2014).

2.0. Statement of the Problem

The task of managing independent regulatory agencies in Kenya is vested in their board of directors and the top management teams. The selection and identification of the board of directors and the TMTs with the right characteristics for each specific independent regulatory agency has been identified as one of the factors that influence their performance (PTRP, 2013). Some board of directors and TMTs of the independent regulatory agencies have been argued to lack appropriate characteristics to support implementation of requisite strategic management practices to positively propel their regulatory agencies to the desired superior organizational performance. TMT characteristics have been linked to the failure of the regulatory agencies to align themselves to their dynamic business environments (Mkalama, 2014). Factors such as utilization of resources, poor identification of stakeholders and their needs, lack of sufficient resources, inappropriate organization structures and weak corporate governance structures have also been identified to affect the performance of the independent regulatory agencies in Kenya (Ongeti, 2014). Most state corporations are implementers of government projects aimed at enhancing service delivery to the citizens. On their part, the independent regulatory agencies are expected to provide oversight over their sectors or sub-sectors so as to spur growth in the infrastructure or markets, improve quality of services to consumers and prevent exploitation of the consumers as well as safeguarding private investor interests by setting climate for sustainable prices for the services. (Jamison & Berg, 2008). Several studies in Kenya have targeted state corporations in general without bringing out the unique attribute of the independent regulatory agencies (Mkalama, 2014; Ongeti, 2014; Kasomi, 2015; Njoroge, 2015).

Previous studies focusing on the effect of TMT characteristics on organizational performance have generated conflicting and inconclusive results. Some of these studies have reported positive significant effect of TMT characteristics on organizational performance while others have reported negative relationships and others showing no relationships. Several scholars have also pointed out the fact that, there is still insufficient studies conducted on the connotation between TMT characteristics and organizational performance. Other studies have highlighted methodological errors, misperception and irregularities in the conceptualization of the concept of the top management teams (Wasike, Ambula & Kariuki, 2016). In addressing these identified gaps, the current study adopted both inward and outward looking measurements of organizational performance to better understand their efficiencies and effectiveness in resource utilization as the independent regulatory agencies exercise their mandates of playing oversight roles in their respective sectors or sub-sectors. The purpose of the study was to investigate the effect of TMT characteristics on the performance of public sector organizations in the regulatory setting in Kenya. The specific objectives of the study were to; determine the effect of top management team demographic characteristics on the organizational performance, examine the effect of top management team psychological characteristics on the organizational performance and assess the effect of top management team cognitive characteristics on the organizational performance of the independent regulatory agencies in Kenya.

The contribution of the findings is that in investigating the effect of TMT demographic characteristics on organizational performance, it is best while done at the individual attributes like age, gender, tenure, educational

and functional backgrounds as some of these attributes may have opposing effects on organizational performance. The findings could also be influenced by the context of the study and the conceptualization of the variables. The current study findings lastly contribute in explaining why there has been inconsistencies in previous research findings on the influence of TMT characteristics on organizational performance. The contribution of the current study findings is that in investigating the influence of TMT characteristics on organizational performance, it is important to include other categories of TMT characteristics like TMT psychological characteristics and TMT cognitive characteristics.

Another contribution of the study is in using validated constructs to reduce inclusive and conflicting study findings. Lastly the findings contribute to the upper echelons theory by giving empirical evidence that TMTs in organizations make decisions that are consistent with their background characteristics and that those decisions have significant positive influence on their organizational performance. The findings of the current study also contribute to the resource based view theory by giving empirical evidence that organizational outcomes are contingent on what the TMTs decide to do with their organizations' capabilities and that TMT cognitive characteristics are part of the resources any organization possess that can create competitive advantage. Lastly, the fact that 30.9% of organizational performance is explained by TMT demographic, psychological and cognitive characteristics with a moderately strong positive correlation evident by coefficient of 0.567 is another proof that while studying organizational performance, TMT characteristics should not be ignored.

3.0. Literature Review

TMT demographic characteristics such as age, education, functional background, tenure (Carpenter, 2002) and gender representation (Dezso & Ross, 2012); TMT psychological characteristics such as self-esteem, general self-efficacy, optimism, emotional stability, task specific self-efficacy, resilience and locus of control (Kinuu, 2014); and TMT cognitive characteristics such as problem solving, attention, memory and learning (Bouquet, Morrison & Birkinshaw, 2003) have been singled out as the main predictors of how the TMTs influence performance of their organizations. The study of TMT demographic and TMT psychological characteristics in this study was underpinned on the upper echelons theory advocated by Hambrick and Mason (1984). According to Hansen, Perry and Reese (2004), how an organization utilizes its resources is as equally important as the resources it possesses. They argued that mere possession of capabilities does not create superior organizational performance, what matters most is how the TMTs utilize the organizations' capabilities toward attainment of agreed upon objectives and goals. The study of TMT cognitive characteristics in this study was underpinned on the resource based view theory (RBV) advocated by Wernerfelt (1984) and Barney (1991), as the TMT cognitive characteristics are viewed in the study as part of the organizations' resources.

According to Njoroge (2015), organizational performance measurements must take into account the extent to which the organization satisfies its stakeholders' expectations and focuses on building closer stakeholder relationships as the stakeholders who form part of organizational environment have a legitimate claim and expectations on the organization's mission or reason for existence. This is consistent with arguments drawn from proponents of corporate governance that states that management policies should effectively address the interests of not only the environmental factors but also the diverse stakeholders. This is rooted in the multi-faceted view of organizational performance and supports Richard, Devinney, Yip and Johnson (2009) exertion that different stakeholders view organizational performance differently and that the mission of an organization are as divergent as the stakeholders. The study of organizational performance was therefore underpinned on the stakeholder theory (Freeman, 1994)

Previous studies carried out on the influence of TMT demographic characteristics on organizational performance in the Kenyan context have yielded conflicting results. Mutuku (2012), found out that TMT demographic diversity negatively affected performance of commercial banks in Kenya. This was because TMT diversity had a negative correlation with the factors making up the four perspectives of organization performance under study namely, financial, customer, internal business processes, and learning and growth. Awino (2013), while studying the effect of top management team diversity, quality decisions and organizational performance in the service industry in

Kenya, found that diversity in TMT tenure had a significant positive influence on the quality of decisions made by the TMTs which ultimately resulted into superior organizational performance. Mkalama (2014), argued that for organizations to benefit from diversity in their top management teams, they must have combination of the right demographics characteristics to enable them properly interpret the situations in their external environments and make appropriate strategies for sustained competitive advantage. The study therefore concluded that age significantly affected organizational performance positively while gender significantly affected organizational performance adversely. These conclusions are consistent with those of Muchemi (2013), who investigated the influence of TMT diversity on performance of commercial banks in Kenya and found that as gender, ethnic and tenure diversity increased, organizational performance decreased hence the three forms of diversities significantly affected organizational performance negatively.

Other studies focusing on the effect of TMT cognitive characteristics on organizational performance have looked at the influence of attributes such as attention, perception, problem solving and information processing. The researchers have argued that perception and attention endeavour to explore the TMTs' abilities to select information for processing while problem solving look into their capacities to use the information to arrive at suitable solutions (Anderson, 1990). TMT cognitive diversity enables the top management teams to have high chances of generating varied information and possibility to have different perspectives on the problem from which to analyze situations facing their organization in greater depths. This will hence result in more insightful decisions and greater capability to solve prevailing problems leading to superior organizational performance (Simons, 1995).

According to Bouquet, Morrison and Birkinshaw (2003), at the individual TMT member level, attention comprise releasing information handling aptitude, time and effort to undertake the work activities. They stressed that the limited resource is not information but the time and attention that top management team can assign to search, sort-out, and interpret evidence in the organizations' business environment. The study findings showed that to avoid information overload, TMTs often decide to ignore some aspects of the situations they encounter that they feel may not be good for the success of their organizations. The study thus concluded that TMTs are often selective in their decision making and problem solving, and that they can only accomplish limited things at a time from the information recorded in their memory and presented by the business environment which in turn effect the performance of their organizations.

Strategic management researchers exploring the role of TMT psychological characteristics have argued that TMT psychological characteristics have the potential to significantly affect organizational performance ((Luthans & Youssef, 2007; Cameron, Dutton, & Quinn, 2003). These scholars have argued that inquiry into the influence of TMT psychological characteristics on organizational performance should start by examining the process by which traits affect behaviours and outcomes, and their impact on situational factors (Barrick, Mount & Judge, 2001). These previous researchers have also asserted that psychological resource theories can be utilized to expound on employees' motivation to acquire, maintain, and build capabilities essential for achieving superior organizational performance. In particular , they have argued that a person's motivation and selections can be elucidated by psychological characteristics or traits like efficacy, hope, optimism and resilience that create higher order capabilities that in turn drive individual performance (Hobfoll, 2002; Wright & Hobfoll, 2004).

The literature reviewed revealed conceptual and contextual gaps that the current study purposed to address. First, most of the studies focusing on the effect of TMT characteristics have tended to focus only on TMT demographic characteristics. Second, most of the previous studies have focused on TMT demographics, psychological and cognitive characteristics individually rather than studying their combined effect. Lastly, most of the studies in Kenya focusing on the effect of TMT characteristics on performance in the public sector setting have generalized on the state corporations. The current study therefore focused on the combined effect of TMT demographic, TMT psychological and TMT cognitive characteristics as well as being specific to independent regulatory agencies as a unique category of state corporations.

The study operationalized TMT demographic characteristics in terms of age, education, functional background, tenure (Carpenter, 2002) and gender representation (Dezso & Ross, 2012). Likewise the study operationalized TMT psychological characteristics in terms of self-esteem, general self-efficacy, optimism, emotional stability,

task specific self-efficacy, resilience and locus of control (Kinuu, 2014). TMT cognitive characteristics was operationalized in terms of problem solving, attention, memory and learning (Bouquet, Morrison & Birkinshaw, 2003). Lastly the study operationalized organizational performance in terms of effectiveness, efficiency, relevance and financial viability (Muruga, 2015). The study thus conceptualized a relationship between TMT characteristics (demographic, psychological and cognitive) and organizational performance as revealed by reviewed literature. In the conceptual model below (figure 1), TMT characteristics is the independent variable while organizational performance is the dependent variable.

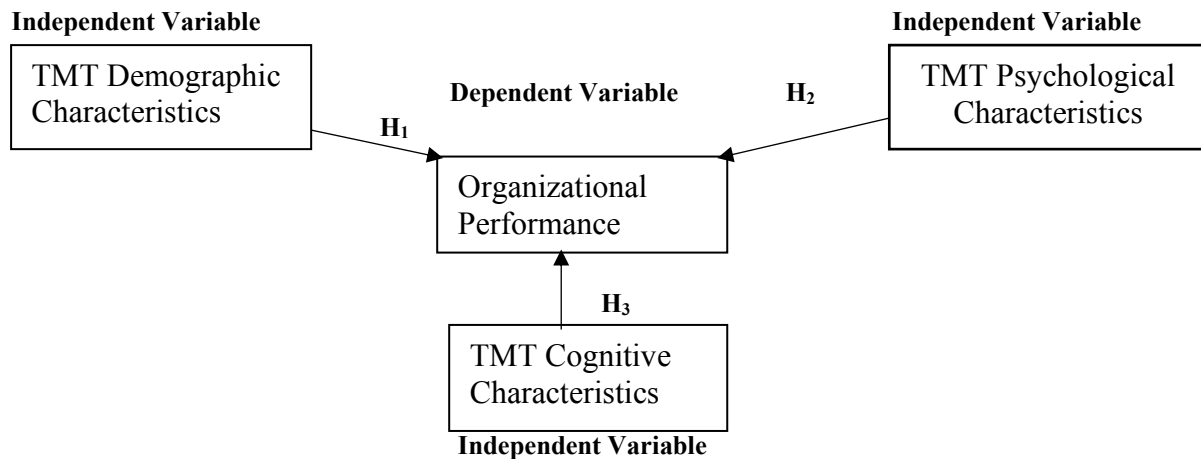


Figure 1: Conceptual Framework

Based on the logic presented in the conceptual framework, the authors proposed that TMT characteristics would affect performance of the independent regulatory agencies in Kenya. Specifically, the study proposed that:

Hypothesis H₁: Top management team demographic characteristics has a significant effect on the organizational performance of the independent regulatory agencies in Kenya.

Hypothesis H₂: Top management team psychological characteristics has a significant effect on the organizational performance of the independent regulatory agencies in Kenya.

Hypothesis H₃: Top management team cognitive characteristics have a significant effect on the organizational performance of the independent regulatory agencies in Kenya.

4.0. Research Methodology

The study adopted positivist research philosophy since it delved to look at what causes the particular relationships and what the effects of these relationship are. Positivism philosophy favours quantitative methods where considerable amount of data is gathered for analysis (Muchemi, 2013). Positivist philosophy was also considered appropriate for the study as the researchers were independent of the phenomena being investigated and the properties of the occurrences under study were objectively measured (Mugenda & Mugenda, 2003). The study used a cross-sectional survey design because cross-sectional surveys enable collection of data across a large number of organizations at one point in time for analysis. In a cross-sectional survey research design, the desired data for each variable in the study can be collected from the entire population or a section of it to help test the research hypotheses (Njoroge, 2015). Other researchers like Mkalama (2014), Muchemi (2013), Ongeti (2014) and Kasomi (2015) while trying to test hypotheses and draw conclusions in similar studies have also used cross-sectional survey design successfully.

The study context was the independent regulatory agencies in Kenya. According to the presidential task force on parastatal reforms (PTPR) of 2013, Kenya had a total of one hundred and seventy-eight (178) state corporations spread across eighteen (18) government ministries as at 30th June 2013, out of which twenty three (23) were independent regulatory agencies (GoK, 2013). The unit of analysis for this study was the twenty-three (23) independent regulatory agencies while the unit of observation was two hundred and thirty two (232) TMTs spread across the twenty three (23) independent regulatory agencies in Kenya. The researcher used a census of all the 232

TMTs from all the independent regulatory agency as each was considered to have unique information relating to how the characteristics of the TMTs affected performance of their independent regulatory agencies.

Primary data was collected using structured questionnaire comprising of closed ended questions. The questionnaire was developed in line with the objectives and hypotheses of the study and guided by the literature review as well as theories underpinning the various study variables. Data on the variables were measured using a five point Likert scale ranging from “not at all” (1) to “to a very large extent” (5). The positive responses were validated, edited for completeness and consistency upon receipt in order to prepare them for statistical analysis. Descriptive and inferential statistics were then used to analyze the prepared data. Multiple regressions was used to establish the effect of TMT characteristics on organizational performance. The descriptive statistics included frequencies, Cronbach’s alpha, measures of central tendency and standard deviation of the variables. Diagnostic tests of normality, multi-collinearity and homoscedasticity were carried out on the study data. The results confirmed that there were no violation of the assumptions of linear regression analysis that could result in biased estimates or over/under confident estimates of the precision of regression coefficients and untrustworthy confidence levels and significance tests (Chatterjee & Hadi, 2012). The inferential statistics included regression model summary, ANOVA and regression coefficients of the independent variables. The hypotheses were tested at 0.05 significance level ($\alpha=0.05$), hence where the calculated p value was less than 0.05, the model was established to be statistically significant and the study failed to reject the null hypothesis but where the calculated p value was greater than 0.05, the model was established to be statistically insignificant and the study rejected the null hypothesis.

5.0. Research Findings

5.1. Respondents Characteristics

The researchers distributed 232 questionnaires, out of which 166 were responded to positively representing an overall response rate of 71.6%. The respondents were from 19 independent regulatory agencies out of the targeted 23, representing 82.6% involvement of the independent regulatory agencies in Kenya in the study. Similar previous studies conducted in the Kenyan context by Muchemi (2013) and Muraga (2015) had comparable response rates of 72.5% and 72.1% respectively. According to Mugenda and Mugenda (2003), 50% response rate is considered adequate, 60% good and above 70% very good. Very good response rates yield results that can be better inferred to a population (Awino, 2011). Therefore, the study response rate was adjudged to be very good and appropriate. The respondent’s characteristics were as shown in table 1.

Table 1: Respondents’ Characteristics

Category	Number	Percentage
Designation		
CEO	10	6.0
Director/GM	45	27.1
Head of Department	84	50.6
Deputy Head of Department	1	0.6
Head of Section	24	14.5
Others	2	1.2
Total	166	100
Gender		
Male	115	69.2
Female	51	30.8
Total	116	100
Age		
30 and Below	1	0.6
31 - 35	5	3.0
36 - 40	9	5.4
41 - 45	47	28.3
46 - 50	65	39.2
51 - 55	34	20.5

Above 55	5	3.0
Total	116	100
Education		
Bachelors	19	11.4
Masters	131	79.0
PhD	16	9.6
Total	166	100
Tenure		
0 - 5	82	49.4
6 - 10	66	39.8
11 - 15	14	8.4
16 - 20	1	0.6
Over 20	3	1.8
Total	166	100
Functional Area		
Support	101	60.8
Technical	65	39.2
Total	166	100.0

The statistics in table 1 show that majority of the respondents were heads of departments at 50.6% (84) followed by directors/general managers at 27.1% (45), heads of sections at 14.5% (24), CEOs at 6.0% (10), others at 1.2% (2) and lastly deputy heads of departments at 0.6% (1). The findings in table 1 therefore demonstrated that all of the respondents were CEOs and those directly reporting to them as the top management team was conceptualized in the study. The summarized statistics presented in table 1 further show that the respondents were not fairly distributed across gender. There were more male respondents at 69.2% (115) than female respondents at 30.8% (51). For age distribution of the respondents, majority were in the age bracket 46-50 at 39.2% (65) followed by 41-45 at 28.3% (47), 51-55 at 20.5% (34), 36-40 at 5.4% (9), a tie of 31-35 and above 55 at 3% (5), and lastly 30 and below at 0.6% (1). Concerning the highest level of education, majority of the respondents had master's degrees at 79% (131), followed by bachelor's degrees at 11.4% (19) and PhD at 9.6% (16). On the functional area of the respondents, support functions which had many departments had majority of the respondents at 60.8% (101) while technical departments that had few departments had 39.2% (65).

5.2. The Variable Characteristics

The descriptive statistics of the study variables comprising of the number of items used to measure the variables, Cronbach's alpha (α), aggregate mean score and aggregate standard deviation are as shown in table 2.

Table 2: Descriptive Characteristics

Variable	No. of Items	(α) Score	Aggregate Mean	Aggregate Std Dev.
TMT Demographic Characteristics	16	0.859	3.684	0.867
TMT Cognitive Characteristics	9	0.944	4.175	0.745
TMT Psychological Characteristics	24	0.867	4.570	0.430
Organizational Performance	28	0.949	4.190	0.787

The descriptive statistics presented in table 2 show that the Cronbach's alpha was 0.859 for demographic characteristics, 0.867 for psychological characteristics, 0.944 for cognitive characteristics and 0.949 for organizational performance that were all greater than the threshold Cronbach's alpha value of 0.7 adopted by the study, thus the research instrument passed internally consistency test. The overall aggregate mean score for demographic characteristics was 3.684 that indicates that the respondents on average agreed to a moderate extent that the attributes of the demographic characteristics applied to their independent regulatory agencies while the standard deviation of 0.867 indicates that there were considerable variations within and among the independent regulatory agencies. The overall aggregate mean score for psychological characteristics was 4.175 with a standard deviation of 0.745 that indicates that on average the respondents agreed to a large extent with the attributes under

psychological characteristics as pertains to their job performance in their current roles while the standard deviation indicates that the responses for psychological characteristics were more clustered around the mean scores than were the scores for demographic characteristics. The overall aggregate mean score for cognitive characteristics was 4.57 with a standard deviation of 0.430 that indicates that on average the respondents agreed to a large extent with the attributes under cognitive characteristics as pertains to their job performance in their current roles while the standard deviation indicates that the responses for cognitive characteristics were more clustered around the mean scores than were the scores for both demographic characteristics and psychological characteristics. Lastly, the overall aggregate mean score for organizational performance was 4.190 that indicates that the respondents agreed to a large extent that the attributes of organizational performance applied to their state regulatory agencies while the standard deviation of 0.877 indicates that there were considerable variations within and among the independent regulatory agencies.

5.3. Test of Hypotheses

The results of the multivariate regression analysis comprising of the model summary, ANNOVA and coefficients of the variables are presented in table 3.

Table 3: Effect of Top Management Team Characteristics on Organizational Performance of Independent Regulatory Agencies

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson	
1	.567 ^a	.322	.309	.37492	1.988	
ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
Regression		10.815	3	3.605	25.646	.000 ^b
Residual		22.771	162	.141		
Total		33.586	165			
Coefficients						
Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	β	Std. Error	Beta			
(Constant)	1.035	.370			2.793	.006
Demographic characteristics	.148	.086	.132		1.726	.086
Psychological characteristics	.379	.081	.363		4.694	.000
Cognitive characteristics	.222	.091	.192		2.437	.016

The statistics in table 3 show that the correlation coefficient (R) is 0.567 which indicates a moderately strong positive correlation between TMT characteristics and organizational performance. The adjusted R square (Adjusted R²) value is 0.309, indicating that 30.9% of variation in performance of the independent regulatory agencies in Kenya is explained by TMT characteristics. The remaining 69.1% of the variation in performance of the independent regulatory agencies in Kenya is explained by other factors not included in the empirical model of the study. The results further show that the F statistic is 25.646 with a p value of 0.000. This is an indication that the regression model is significant. The summarized statistics in table 3 further show a standardized beta coefficient for TMT demographic characteristics of 0.132 and calculated p value of 0.086 that indicates that at 0.05 significance level, TMT demographic characteristics had no significant effect on organizational performance of the independent regulatory agencies in Kenya. The standardized beta coefficient for TMT psychological characteristics of 0.363 and significance p value of 0.000 indicates that at 0.05 significance level, TMT psychological characteristics had a significant positive effect on organizational performance of the independent regulatory agencies in Kenya. Likewise the standardized beta coefficient for TMT cognitive characteristics of 0.192 and significance p-value of 0.016 indicates that at 0.05 significance level, TMT cognitive characteristics had

a significant positive effect on organizational performance of the independent regulatory agencies in Kenya. Thus hypotheses two and three for the study are supported while hypothesis one is not.

6.0. Discussion of Findings

The findings of this study can be explained by the descriptive statistics, results from previous researchers and, the upper echelons theory and the resource based view theory. The findings on hypothesis one indicated that TMT demographic characteristics does not have any significant statistical effect on organizational performance. The findings of the study are consistent with previous research findings that indicated that some studies reported significant positive effects of age diversity on team and company performance (Kilduff, Angelmar & Mehra, 2000), others reported no significant effects (Bunderson & Sutcliffe, 2002) while others reported significant negative effects of age diversity on team processes and performance (Leonard, Levine & Joshi, 2004). The descriptive statistics indicates that according to the respondents, age and tenure were perceived to affect organizational performance to a lesser extent as compared to educational level and functional backgrounds. The descriptive statistics also show that there was a dominance of particular categories in the demographic characteristics like in gender; male were majority at 69.2%, in education; masters' degrees were a majority at 78.4% and in tenure; those between 0-5 years were a majority at 49.4%. These could have tilted the findings in favour of the perspectives of the dominant categories. The findings of the study are also consistent with Kasomi (2015) who concluded that the influence of diversity in top management teams on organizational performance of state corporations in Kenya was not statistically significant at 95 percent confidence level. He found that age, education level and functional backgrounds had negative coefficients while gender and tenure had positive coefficients. This meant age, education level and functional background diversities had negative effects on performance of the state corporations while tenure and gender diversity had positive effects hence making the overall effect of TMT demographic diversity insignificant. Mkalama (2014) also found that top management demographics had a weak positive relationship with performance of state corporations in Kenya by explaining only 5 percent variation in the performance. She however on the contrary found out that age, educational level, functional backgrounds and tenure diversities had positive effects on organizational performance while gender diversity had negative effect on organizational performance of the state corporations in Kenya.

The study findings on hypothesis one however contradict upper echelon theory that posits that top management teams in organizations make decisions that are consistent with their background characteristics and that those decisions positively influence the performance of their organizations. From the upper echelon theory postulates, tenure of TMTs is linked to experience that come with superior individual performance, educational level is viewed to generate better diagnosis of the problems, age is viewed to bring maturity in handling situations, functional backgrounds is viewed to bring special expertise in the operational situations and gender diversity is viewed to bring different perspectives of situations that is necessary for superior organizational performance. From the descriptive statistics of the current study, it is evident that the male gender was dominant in the TMTs of the independent regulatory agencies in Kenya. Also masters' degrees was dominant in educational level, 0-5 years was dominant in the tenure and those above 46 years of age were the majority in the study respondents. This clearly shows that there was no fair distribution of the respondents that could have affected the study findings.

The findings on hypothesis two showed a positive significant effect of TMT psychological characteristics on performance. The findings of the current study are consistent with the findings of Kinuu (2014) that TMT psychological characteristics had a significant effect on efficient and effective performance of companies listed in Nairobi Securities Exchange. The findings are also consistent with Luthans and Youssef (2007), and Cameron, Dutton and Quinn (2003) that positive psychological characteristics of the workforce (TMTs and other employees) have the potential to enrich organizations by increasing individual and organizational effectiveness. The findings for TMT psychological characteristics also supports the postulates of the upper echelon theory that top management teams in organizations make decisions that are consistent with their background characteristics and that those decisions positively influence the performance of their organizations. The descriptive statistics of the study for TMT psychological characteristics indicated that except for emotional stability and optimism, all the sub-variables under TMT psychological characteristics had aggregate means scores greater than 4.0, with the

overall aggregate mean score for TMT psychological characteristics being 4.175. This showed that the respondents agreed to a large extent that the attributes of the study under TMT psychological characteristics applied to their independent regulatory agencies.

The findings on hypothesis three also showed a positive significant effect of TMT cognitive characteristics on performance. The findings of the current study are consistent with the study by Bromiley and Rau (2016), who argued that cognitive approach explicitly addresses information processing like problem framing and perceptions of industry that are key determining factors of organizational performance. The approach believes that understanding the cognitive underpinning of decisions will give insights into TMTs' effects on strategy process and organizational performance. They argued that the influence of TMT cognitive characteristics on organizational performance looks at the consequences of a few closely related concepts such as attention, perception, cognition, and information processing. The findings of the current study are also consistent with the resource based view theory that postulates that TMT cognitive characteristics plays a central role in capability development and deployment (Benner & Tripsas, 2012). According to Hansen, Perry and Reese (2004), what a firm does with its resources is as important as which resources it possesses. The implication is that the mere possession of capabilities does not affect organizational performance. Outcomes are contingent on what the TMTs decide to do with their organizations' capabilities. The descriptive statistics of the study showed that TMT cognitive characteristics had the highest mean scores, with the overall aggregate mean score of 4.57 which was higher than for TMT demographic (3.684) and TMT psychological characteristics (4.175). This showed that the respondents agreed to a large extent with the attributes measured under TMT cognitive characteristics more than the attributes measured under both TMT demographic and TMT psychological characteristics.

7.0. Conclusions and Recommendations

From the findings of the study reported, the research makes three conclusions. First, that the respondents on average agreed to a moderate extent that the attributes of the TMT demographic characteristics applied to their independent regulatory agencies, that on average the respondents agreed to a large extent with the attributes under TMT psychological characteristics as pertains to their job performance in their current roles in their independent regulatory agencies, and that on average the respondents agreed to a large extent with the attributes under TMT cognitive characteristics as pertains to their job performance in their current roles in their independent regulatory agencies. Secondly, that the findings of the study may be explained by the fact that some attributes of top management team demographic characteristics have positive influence on organizational performance while others have negative influence on organizational performance hence the overall influence could either be significant or insignificant depending on the attributes included in the study. Lastly, that TMT psychological characteristics and TMT cognitive characteristics significantly affects organizational performance positively.

Based on the results and the findings that TMT characteristics have a great influence on organizational performance, the study therefore recommends that the recruitment process of TMT for the independent regulatory agencies and other governmental agencies should integrate ways of selecting candidates with appropriate psychological and cognitive characteristics for the jobs. This is because these TMT characteristics are better predictors of how the TMTs will influence the performance of their organizations than the traditional demographic characteristics used in most recruitment processes.

The context of the study was Kenyan independent regulatory agencies. Future research could be done not to replicate this study but instead compare the influence of TMT characteristics on performance of Kenyan independent regulatory agencies with those of public companies quoted at the Nairobi Securities Exchange or other sectors of the economy to check whether the findings will be the same. Future research work could also be done in other non-commercial state corporations and public benefit organizations. Also the same study could be replicated but a different context could be used. Similar research could also be carried out by bringing in other TMT demographic characteristics like, ethnicity, culture, religion as well as other mediating and moderating variables. This will help in explaining how wider perspectives of TMT demographic diversity affect performance

of the various organizations and build the body of knowledge further through investigating other mediating and moderating variables. This will expand the scope of the findings and level of generalization.

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Institutional Ownership, External Auditor Reputation, Financial Leverage, and Earnings Management

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Abstract

Profits show the performance of managers before the related parties, such as investors and creditors. Therefore, managers often incorrectly state them in the published annual financial reports to protect their reputation. Undoubtedly, this action needs to be reduced by the governance mechanism, like supervision by institutions as the owner and audit by the external public accountant firm. To control these two effects on profits management, additionally, this study employs financial leverage. This study aims to prove the impact of institutional ownership, the external auditor reputation, and financial leverage on profits management. The population and the samples are the non-financial companies establishing the LQ45 index from 2014 to 2018, getting taken by the simple random sampling technique. Also, the regression model performs as the technique to examine the data. By denoting the testing of the hypothesis results and the discussion section, this study summarizes that institutional ownership and reputable external auditor effectively decrease profits management. Additionally, although firms have much debt, they cut the tendency to manage their profits because of applying transparency.

Keywords: External Auditor Reputation, Financial Leverage, Institutional Ownership, Profits Management

I. INTRODUCTION

For a company, profits are the end goal. By owning them, the company can positively contribute to shareholder prosperity, business expansion (Kasmir, 2013), and build a reputation before creditors (Gitman & Zutter, 2012). Moreover, these profits are recorded and announced to the public (Siallagan & Machfoedz, 2006). Regarding these profits directly reflect the manager's operational performance (Kasmir, 2013); consequently, to protect their reputation, managers do not correctly report them (Merchant & Rockness, 1994).

One way to decrease the possibility of profit management is by implementing a virtuous governance mechanism. In this context, the company can handle it by demanding institutions as its owner (Herawaty, 2008). According to Herawaty (2008), enhancing the proportion of institution shares is an effective way to reduce it. This action stands affirmed by the study result of Sumanto, Asrori, & Kiswanto (2014), Ajay & Madhumathi (2015), Gumilang,

Suhadak, & Mangesti (2015) that reports the higher portion of the share the institutions have, the lower the profit management occurs.

Besides, hiring the auditors affiliated with the big-4 is another way to reduce profits management. This situation stays affirmed by Kao & Chen (2004), Yang, Chun, & Ramadili (2009), Herlambang & Darsono (2015), Shirzad & Haghghi (2015), Sastrawati & Hatane (2016), Lopes (2018), and Firmanti et al. (2019) revealing a negative effect of this reputable auditor on profit management.

Additionally, high leverage can cut the firm's tendency to manage its profits as long as it applies transparency. This propensity stands confirmed by the study of Kao & Chen (2004), Emamgholipour, Bagheri, Mansourinia, & Arabi (2013), Firmanti, Pirzada, & Budiman (2019), showing a negative effect of financial *leverage* on profits management.

To prove the effectiveness of institutions becoming the owner, the external auditor's reputation, and financial leverage on profits management, this study takes the companies forming the LQ45 index between 2014 and 2018. As reputable companies in their market capitalization, these companies should be able to overcome profits management.

The institutions having the dominant stock portion in the public company usually consist of banks, pension funds, investment trust, investment companies (Yang, Chun, & Ramadili, 2009). In good governance, these institutions actively monitor and supervise top managers. Consequently, the propensity of managers for managing profits goes down (Ajay & Madhumathi, 2015). They do it because of the institutions' proxy fight, which probably makes them fired up (Rose, Westerfield, & Jaffe, 2010). This argument obtains the confirmation of Sumanto et al. (2014), Ajay & Madhumathi (2015), and Gumilang et al. (2015), showing a negative effect of institutional ownership on profits management. By mentioning this explanation, planned hypothesis one is as follows.

H₁: The influence of institutional ownership on profits management is negative.

When the audit function runs perfectly, profits management does not certainly occur. To attain this condition, the public accounting firm needs to exist (Lopes, 2018). As the service scope, besides tax consulting, this firm provides the auditing service (Wen, Yang, Bu, Diers, & Wang, 2018). Because of the unsatisfactory situation, the technical competence and independence possessed by the auditors affiliated with the big four can only shrink the tendency of earnings management (Lopes, 2018). This statement also obtains confirmation from Kao & Chen (2004), Yang et al. (2009), Herlambang & Darsono (2015), Shirzad & Haghghi (2015), Sastrawati & Hatane (2016), Lopes (2018), and Firmanti et al. (2019). They reveal that the existence of the big four affiliated with public accounting firms can reduce the potency of managing profits. By mentioning this explanation, planned hypothesis two is as follows.

H₂: The influence of reputable external auditors on profits management is negative.

Financial leverage shows the use of debt for funding the company's assets (Sartono, 2008). The managers in the company with high liabilities usually tend to manage the profits because they want to ensure the creditors that the company managed still look good (Yang et al., 2009). Unlike this company, a company implementing transparency will disclose its real condition to the public (Tjager, Alijoyo, Djemat, & Soembodo, 2003). As a consequence, the managers do not tend to manipulate profit even though the firm has a significant portion of the debt, as Kao & Chen (2004), Emamgholipour et al. (2013), Firmanti et al. (2019) express. By mentioning this explanation, planned hypothesis three is as follows.

H₃: The influence of financial leverage on profits management is positive.

II. RESEARCH METHOD

2.1. The Variable Definition

There are two types of variables employed in this study. Firstly, the explained variable, profit management, is measured by the ratio of accrual working capital to revenue (AWCR) at the end of the year. This proxy refers to

Suhardianto & Harymawan (2011). Secondly, the explaining variables: i.e., institutional ownership, external auditor reputation, and financial leverage.

- Related to institutional ownership (IO), the ratio of shares owned by institutions at the end of the year becomes this proxy. It denotes Asrori & Kiswanto (2014), Ajay & Madhumathi (2015), and Gumilang et al. (2015).
- Related to the reputation of external auditors (DBIG4), the dummy variable of the firms hiring the big four auditors (DBIG4=1) and non-big four auditors (DBIG4=0) at the end of the year becomes this proxy. It denotes Kao & Chen (2004), Yang et al. (2009), Herlambang & Darsono (2015), Shirzad & Haghghi (2015), Sastrawati & Hatane (2016), Lopes (2018), and Firmanti et al. (2019).
- Related to financial leverage, we use the debt to total asset ratio (DAR) at the end of the year as the proxy. It denotes Kao & Chen (2004), Emamgholipour et al. (2013), and Firmanti et al. (2019).

2.2. Population and Samples

This study utilizes the non-financial companies forming the LQ45 index on the Indonesia Stock Exchange between 2014 and 2018 as the population. These companies get picked up because of the same structure of the debt. Unfortunately, during this period, not all companies are consistently present as constituents. Thus, the relevant number of companies is essential to know based on the observation form lists of the LQ45 index members. After observing them, 31 non-financial companies exist.

Moreover, to know the sample sum (SS), this study employs the Slovin formula with the error boundary (EB) of 10%, as seen in the first equation.

$$SS = \frac{N}{1+N(EB)^2} \dots\dots\dots (1)$$

By indicating this formula, the sum of samples is $\frac{31}{1+31(10\%)*(10\%)} = 23.66 \approx 24$ firms, selected by a simple random sampling method; their name is available in Table 1.

Table 1: The name of the samples

No.	Code	The name of the firm
1	ADRO	Adaro Energy Tbk
2	AKRA	AKR Corporindo Tbk
3	ANTM	Aneka Tambang (Persero) Tbk
4	ASII	Astra International Tbk
5	BSDE	Bumi Serpong Damai Tbk
6	CPIN	Charoen Pokphan Indonesia Tbk
7	EXCL	XL Axiata Tbk
8	GGRM	Gudang Garam Tbk
9	ICBP	Indofood CBP Sukses Makmur Tbk
10	INCO	Vale Indonesia Tbk
11	INDF	Indofood Sukses Makmur Tbk
12	INTP	Indocement Tunggul Prakasa Tbk
13	ITMG	Indo Tambangraya Megah Tbk
14	JSMR	Jasa Marga (Persero) Tbk
15	KLBF	Kalbe Farma Tbk
16	LPKR	Lippo Karawaci Tbk
17	LPPF	Matahari Department Store Tbk
18	SCMA	Surya Citra Media Tbk
19	SMGR	Semen Indonesia (Persero) Tbk
20	TLKM	Telekomunikasi Indonesia (Persero) Tbk

Table 1: The name of the samples

No.	Code	The name of the firm
21	UNTR	United Tractors Tbk
22	UNVR	Unilever Indonesia Tbk
23	WIKA	Wijaya Karya (Persero) Tbk
24	WSKT	Waskita Karya (Persero) Tbk

2.3. The method for analyzing the data

By checking the nature of the research variables, the suitable method to analyze data is the regression model with pooled data, as seen in the second equation.

$$AWCR_{it} = \beta_0 + \beta_1 IO_{it} + \beta_2 DBIG4_{it} + \beta_3 DAR_{it} + \varepsilon_{it} \dots\dots\dots (2)$$

According to Nacrohwi & Usman (2006), the ordinary least square becomes the regression model technique to estimate its coefficients. Consequently, this model must meet the requirement of classical assumptions, like normality, homoscedasticity, non-multicollinearity, and non-autocorrelation, as explained by Ghozali (2016).

III. RESULT AND DISCUSSION

The result displayed in this section consists of the explanation of the classical assumption test (see point 3.1), the regression model estimation (see point 3.2), the hypothesis testing (see point 3.3), and the discussion presenting the hypothesis testing clarification (see point 3.4)

3.1. The result of the classical assumption tests

In this study, the regression model's residuals do not meet the normality test, mirrored by the asymptotic probability (2-tailed) of the Z-statistic Kolmogorov-Smirnov of 0.001, as displayed in Table 2, which is less than 5% significance level. By seeing the number of observations, this condition gets allowed because of the central limit (Bowerman & O'Connell, 2003).

Table 2: The test result of the normality

Description	Unstandardized Residual
N	120
Kolmogorov-Smirnov Z	1.922
Asymptotic Sig. (2-tailed)	0.001

a. Test distribution is Normal.

b. Calculated from data.

Source: Resulted by IBM SPSS 20

This study confirms that homoscedasticity by the White test with cross-term, reflected by the probability of t-statistic of IO, IO², IO*DBIG4, IO*DA, DBIG4, DBIG4*DAR, DAR, DAR² of 0.5878, 0.4311, 0.2732, 0.5666, 0.1028, 0.1749, 0.1032, 0.9809, exceeding 5% significance level, showing no effect on variance residual (see Table 3).

Table 3: The test result of White heteroscedasticity with the cross term: Variance residuals = f (IO, IO², IO*DBIG4, IO*DA, DBIG4, DBIG4*DAR, DAR, DAR²)

Variable	Coefficient	Std. Error	t-Statistic	Probability.
C	0.405593	0.234067	1.732808	0.0859
IO	-0.001863	0.003426	-0.543590	0.5878
IO ²	-1.84E-05	2.32E-05	-0.790194	0.4311
IO*DBIG4	0.003808	0.003458	1.101165	0.2732
IO*DAR	0.000559	0.000973	0.574725	0.5666

Table 3: The test result of White heteroscedasticity with the cross term: Variance residuals = $f(\text{IO}, \text{IO}^2, \text{IO} \cdot \text{DBIG4}, \text{IO} \cdot \text{DAR}, \text{DBIG4}, \text{DBIG4} \cdot \text{DAR}, \text{DAR}, \text{DAR}^2)$

Variable	Coefficient	Std. Error	t-Statistic	Probability.
DBIG4	-0.451206	0.274286	-1.645021	0.1028
DBIG4*DAR	0.224598	0.164486	1.365448	0.1749
DAR	-0.242100	0.147364	-1.642869	0.1032
DAR ²	-0.001403	0.058518	-0.023980	0.9809

Source: Resulted by E-views 6.

This study shows the autocorrelation test result (see Table 4) and multicollinearity detection (see Table 5).

- As seen in Table 4, the Z-statistic's asymptotic probability of the runs test based on mean is 0.365. Because this value goes beyond a 5% significance level, the autocorrelation does not exist.

Table 4: The test result of runs

Description	Unstandardized Residual
Test Value of mean	0.0000000
Cases < Test Value	62
Cases \geq Test Value	58
Total Cases	120
Number of Runs	56
Z	-0.906
Asymptotic Sig. (2-tailed)	0.365

Source: Resulted by IBM SPSS 20

- As displayed in Table 5, IO, DBIG4, and DAR's variance inflation factor is 1.002, 1.099, and 1.098. All these values are less than 10; therefore, the multicollinearity is not available.

Table 5: The detection result of multicollinearity

Independent Variable	IO	DBIG4	DAR
Tolerance	0.998	0.910	0.910
Variance inflation factor	1.002	1.099	1.098

Source: Resulted by IBM SPSS 20

3.2. The result of the regression model estimation

Table 6 exhibits the regression model's estimation result showing the influence of institutional ownership, reputable external auditor, and debt policy on profits management and the information related to the hypotheses testing, like the probability of t-statistic for each independent variable: IO, DBIG, and DAR.

Table 6: The estimation result of the regression model of the influence of institutional ownership, reputable external auditor, and debt policy on profits management

Independent Variable	Coefficient	Std. Error	t-Statistic	Probability
C	0.395428	0.085214	4.640388	0.0000
IO	-0.002414	0.001018	-2.372647	0.0193
DBIG4	-0.173513	0.040887	-4.243728	0.0000
DAR	-0.199083	0.083251	-2.391343	0.0184
R-squared	0.180172	Mean dependent variable		0.016371
Adjusted R-squared	0.158969	S.D. dependent variable		0.173634
SE of regression	0.159236	Akaike info criterion		-0.804091
Sum squared residual	2.941315	Schwarz criterion		-0.711175
Log-likelihood	52.24547	Hannan-Quinn criterion		-0.766357
F-statistic	8.497683	Durbin-Watson statistic		2.383873
Prob. (F-statistic)	0.000038			

Source: Resulted by E-Views 6.

3.3. The result of the hypothesis testing

Contrasting the probability value of the t-statistic (see Table 6) with the significance level (α) of 5% is vital to test the null hypotheses one, two, and three. This value has to be less than 5% to reject these hypotheses.

- IO has a probability value of 0.0193. Therefore, the first null hypothesis becomes banned. Instead, the first hypothesis becoming the alternative gets accepted.
- DBIG4 has a probability value of 0.0000. Hence, the second null hypothesis becomes disallowed. Instead, the second hypothesis becoming the alternative gets supported.
- DAR has a probability value of 0.0184. Consequently, the third null hypothesis becomes rejected. Instead, the third hypothesis becoming the alternative gets acknowledged.

3.4. Discussion

Based on the hypotheses testing, this research expresses three pieces of evidence. Firstly, institutional ownership decreases profits management. This situation means the monitoring done by the institutions is effective because of the proxy fight right. If they use this proxy, they can replace the position of existing managers with the new ones. Therefore, managers will obey what the institutions want. Based on this fact, this research affirms Sumanto et al. (2014), Ajay & Madhumathi (2015), and Gumilang et al. (2015).

Secondly, the reputable external auditor reduces profits management. This condition means the public accountant firms (PAF) allied with the big four auditors can diminish earnings management. Unlike the PAFs associated with non-big four auditors, the PAFs connected with the big four auditors have more competency and independence. Based on this fact, this research confirms Kao & Chen (2004), Yang et al. (2009), Herlambang & Darsono (2015), Shirzad & Haghghi (2015), Sastrawati & Hatane (2016), Lopes (2018), and Firmanti et al. (2019).

Finally, debt policy lessens profits management. This circumstance is only for the firms applying transparency. The managers in these firms attempt to report the actual earnings while the liabilities position goes up. Based on this fact, this research supports Kao & Chen (2004), Emamgholipour et al. (2013), and Firmanti et al. (2019).

By considering the results, this study recommends several things to the firms to reduce the manager's tendency to manage the profits. Firstly, to monitor managers effectively, the institutions must participate actively and operate the proxy contest if managers do not want to follow the reputable firm's rules without the earnings management issue. Secondly, the firms suggest employing public accountant firms affiliated with the big four auditors. Thirdly, applying the transparency principle as the foundation of the managers to work.

IV. CONCLUSION AND RECOMMENDATIONS

This study aims to prove the effect of institutional ownership, the external auditor reputation, and financial leverage on profits management of the non-financial companies becoming the member LQ45 index from 2014 to 2018 as the sample. Based on the examined hypotheses and the discussed results, this study infers three pieces of evidence.

1. The effect of institutional ownership on profits management is negative.
2. The effect of the external auditor's reputation on profits management is negative.
3. The effect of financial leverage on profits management is negative.

As the limitations, this study only uses the non-financial companies forming the LQ45 index, five years as the number of periods, and three contributing factors of earnings management. Three situations expose the chance for the next research to:

- a. Utilize all the non-financial firms in the Indonesia stock exchange to result in the broader conclusion about these three determinants of earnings management;
- b. Outstretch number of periods into 10 or 15 years;
- c. Apply the other explaining variables of profit management like managerial ownership, the supervising board-related measures (board size, independence, meeting), audit committee size, firm size, firm growth,

growth opportunity, company age, profitability, free cash flow, asymmetric information, cash flow from operating activity.

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Investment Decisions: The Results of Knowledge, Income, and Self-Control

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Abstract

Investment is an economic activity that can be a way for a person to expand or maintain his wealth. However, in investing, the public must be more careful in making decisions so that they are not trapped by fake investments. In investing, there are several factors that influence the decision to invest, namely Financial Knowledge, Income, Self-Control, Financial Behavior, and Financial Attitude towards Investment Decisions. This study aims to examine the influence of the variables of Financial Knowledge, Income, and Self-Control on Investing Decisions mediated by Financial Behavior and Financial Attitudes. This study uses Financial Knowledge, Income, and Self-Control as independent variables, then Investment Decisions as the dependent variable, then Financial Behavior, and Financial Attitudes as intervening variables. The results of this study indicate that financial knowledge has an effect on financial behavior. Financial Knowledge affects Financial Attitudes. Financial knowledge influences investment decisions. Income has an effect on Financial Behavior. Income has an effect on Financial Attitudes. Income does not affect the Investment Decision. Self-control affects financial behavior. Self-Control affects Financial Attitudes. Self-Control has no effect on Investment Decisions. Financial Behavior has no effect on Investment Decisions. Financial Attitudes do not affect the Investment Decision.

Keywords: Financial Attitudes, Financial Behavior, Financial Knowledge, Income, Investment Decisions, Self-Control

1. Introduction

1.1 Introduction

The ongoing global economic crisis has had various uncertain impacts on the economies of various countries. In times of crisis that is currently befalling the world, the Indonesian government is trying hard to stabilize and maintain its economic development. Where one of the financial systems functions to accelerate economic growth, more evenly distribute economic growth by spreading its benefits to all levels of society, reduce poverty and will strengthen Indonesia's status as a developing country with middle income. In this modern era, finance is one of the main search goals for all people, every human being needs property to fulfill all his needs. Every individual basically needs investment, because with investment everyone can maintain and expand his wealth base which can be used as social security in his future, but how to get more funds with smart financial management is still lacking.

There are still many employees of productive age who don't know that personal investment planning is very good for financial well-being for themselves and the future.

The initial stage for employees of productive age to invest is to have knowledge about investing so that they do not lose or even get caught doing 'fake' investments, or even being tricked by irresponsible parties with attractive lures, by knowing in advance the types of investments that are there and the risks of each investments. Experience in managing finances is not only about owning investment products but also utilizing investment products. So that someone must be more careful and pay attention to the risks and returns that will affect the decisions to be taken. There are psychological factors that influence investment decisions and the results to be achieved, namely, there are different beliefs about fate or all events that occur in society which they believe to be bad luck and luck or those who believe that everything they experience depends on their own efforts.

Financial knowledge factors that play an important role in deciding investment planning, with the knowledge they have about how to manage and plan finances that can provide benefits and avoid losses. Likewise, the level of financial knowledge among employees of productive age has not been evenly distributed. Thus, it is the middle and upper economic groups who pay more attention to their financial knowledge. With proper financial management which is certainly supported by good financial knowledge, the standard of living is expected to increase, this applies to every income level, because no matter how high a person's income level, without proper management, financial security will definitely be difficult to achieve. The main focus so that someone can manage their income healthily in this modern era to achieve financial well-being, is to have financial knowledge and other factors that influence investment decisions are income. Where, how much a person's income affects investment planning in accordance with his income.

This research is in line with the program owned by the Indonesian Government, namely to find out how much care the Indonesian people, especially employees of productive age, have on their future finances. The importance of educating, increasing literacy and financial inclusion for the Indonesian people to encourage economic growth. Financial inclusion, based on Presidential Regulation Number 82 of 2016 concerning the National Strategy for Financial Inclusion (NSFI) is a condition in which every member of society has access to various formal financial services that are quality, timely, smooth, and safe at affordable costs according to their needs and abilities. Each financial inclusion basically refers to the number of people who become customers or users of financial services. Financial inclusion and literacy, of course, are related to one another. Inclusion without good literacy will not be significant, especially for the economy. If inclusion relates to the number of users of financial services, financial literacy focuses more on managing the money they have. Someone with good financial literacy generally knows how to make the most money. So that the inclusion was not in vain. There are four levels of financial literacy of the Indonesian population based on a survey by the Financial Services Authority (FSA), namely Well literate where people have knowledge and confidence in various financial service institutions and financial service products, including features, benefits and risks, rights and obligations related to financial products and services, and have skills in using financial products and services. Sufficient literate where the public has knowledge and confidence about financial service institutions and financial products and services, including features, benefits and risks, rights and obligations related to financial products and services. Less literate where people tend to have knowledge about financial service institutions, financial products and services. Not literate where people do not have knowledge and confidence in financial service institutions and financial products and services, and do not have skills in using financial products and services.

There is a paradigm shift in the concept of financial literacy in various global financial literacy strategies. The changes were made as a form of alignment with the concept of financial well-being. Financial well-being is a condition in which a person has been able to fulfill current and future financial obligations, has preparation to meet future financial needs, and is able to make choices that can be enjoyed in his life. Barclays (2014) explains that financial well-being is the condition and feelings of a person who feels safe and financially healthy for now and in the future. Joo (2008) defines personal financial wellness as a desired financial health status, and as a comprehensive and multidimensional concept, which includes financial satisfaction, financial condition objectives, financial attitudes and behaviors, and behavior that cannot be assessed from a single measurement. Kim *et al* (2003) found that credit consulting programs and debt management can directly overcome events that

complicate one's finances and indirectly affect the financial well-being they feel. Vlaev & Elliott (2014) states that financial well-being is influenced by individual financial management where the person has control over their financial aspects so that they can manage finances well. In addition, Zemtsov & Osipova (2016) stated that financial well-being depends on financial behavior and the flow of income generated by assets owned. Thus, the ability to develop assets is important to improve one's financial well-being. From these studies, it can be concluded that in order for a person to be a financial well-being, financial management skills and the ability to invest and have financial resilience are required.

It cannot be denied that the income level of productive age employees greatly influences one's investment planning decisions. So the income level of productive age employees has an effect on their interest in investing part of their income. For example, saving money for uncertain future expenses and other reasons. However, the goals to be achieved by each individual worker must be different as well as in the process of achieving them. There are individuals who plan for the future in a detailed, directed and mature manner, but there are also those without any planning at all (Henager & Cude 2016). Workers who know and apply financial management are wiser in using funds and they are aware of how to manage financial management to be healthier. Previous studies have revealed that young age is a transitional period from children to adults, so it is important for them to learn to adjust between needs and wants, and to understand about future investment (Hastings & Mitchell, 2020). From this, it is hoped that employees of productive age will be able to manage finances well and have an investment for the future so that they have a prosperous life.

Many types of investments exist and each has its own risks. Currently savings, deposits are no longer the only attractive investment for people who understand financial developments because of the small returns on investment, but some investors still choose deposits and savings as the main choice. There are many alternatives available for people of various kinds, from low-risk to high-risk, some with fixed income to varied incomes. Indonesian society has a variety of investment instruments. Starting from savings or deposits, property, gold/jewelry to stocks or mutual funds. Of the various options, savings/time deposits are still the people's choice in recent years. Then the increasing property value has become an attraction for Indonesian consumers. Currently, Indonesians are starting to buy property as an instrument of choice for investing. Property is now not only for living, but a form of investment in the short and long term. Those who have more income are able to expand their education about financial knowledge and also expand their wealth by doing investment activities by taking advantage of their more income. Conversely, those with low economic levels will find it difficult to obtain wealth due to limitations in access to information.

1.2 Prior Studies

There are several prior studies, one of which is the research of Sumtoro & Anastasia (2015), where this study uses questionnaire data with 100 respondents. The sampling technique in this study is non-probability sampling. The validity and reliability test is aimed at testing each variable, using the KMO and Bartlett's Test, Total Variance Explained, and Rotated Component Matrix. This study shows that investors have a relationship with psychological factors in the prospect theory consisting of mental accounting, regret aversion, loss aversion. Regret aversion is the most considered factor in making the decision to invest in residential property types of houses and apartments in Surabaya. Then research on the effect of financial literacy, financial behavior and income on investment decisions (Fitriarianti, 2018), which results in financial literacy has no significant effect on investment decisions, while financial behavior and income have a significant effect on investment decisions. In addition, there is also research by Damayanti & Fauzi (2020), which shows that the value of health can strengthen the direction of the relationship (moderate) the influence of financial knowledge and financial attitudes on investment decisions. In addition, there is research by Munawar et al (2020) which results that financial literacy has a significant effect on investment decision making, or has an important role in shaping investment decision making, and motivation has a significant effect on investment decision making or has a role. on making decisions on investment. Then research on the effect of the framing effect on investment decision making with locus of control as a moderating variable (Wardani, 2014), which shows that decision makers who are in Positive Framing conditions will invest because they are not affected by the risks to be borne. The decision maker in the Negative Framing condition will make an investment, the same decision is also made by the decision maker in the no framing condition. This indicates that

there is no influence of Locus of Control on investment decision making because decision makers with internal locus of control or external locus of control make the same decisions, namely making investments. Then research by Musdalifah (2016) shows a significant influence where locus of control, financial knowledge and income have a positive effect on investment decisions in the people of Makassar City. Furthermore, there is research on the Effect of Financial Knowledge on Financial Behavior and Financial Position through the Behavioral Approach of Financial Management for Young Workers (Arlinawati, 2020), where this research results in financial behavior not always determining the financial position of young workers. Many other things are able to determine the financial position directly, namely the income and ethnicity of young workers. Meanwhile, financial behavior can actually be created with the support of self-control, financial knowledge and financial attitudes. As a finding, it is known that the vulnerability of young workers' financial behavior in financial positions.

1.3 Hypothesis Development

Silvy & Yulianti (2013) revealed that financial knowledge is everything about finance that is experienced or that happens in everyday life. Meanwhile, according to Humaira & Sagoro (2018) financial knowledge is everything about finance that is experienced or what happens in everyday life. Financial knowledge can also be defined as a person's mastery of various things about the world of finance, which consists of financial tools and financial skills. (Arianti, 2018; Moreland, 2018; Smith *et al.*, 2019) concluded that financial knowledge has an effect on financial behavior.

H₁: Financial knowledge affects Financial Behavior.

Financial Attitudes explain that the control possessed by individuals leads individuals to have a better attitude. Financial experience will lead individuals to use financial management principles as a control on their financial condition. High financial knowledge will give birth to complex financial views, thus encouraging individuals to be more active in evaluating their financial condition. Evaluation of financial conditions encourages individuals to have a good financial attitude which is formed by a belief based on their financial knowledge. Productive age employees are individuals with learning related to very complex financial aspects, so that with this knowledge, employees are expected to be able to form a positive attitude towards finance based on their financial knowledge. The positive attitude of employees regarding the financial aspects is the result of the evaluation process - evaluation of their financial condition. Evaluations of employees' financial conditions are based on their financial knowledge, so that the evaluation process is based on the correct financial management concept. Research by Tang & Baker (2016) and Garber & Koyama (2016) states that financial knowledge has a positive effect on individual financial attitudes. In his research stated that good financial knowledge in individuals will encourage the formation of individual positive attitudes towards financial attitudes. This attitude is formed from the conceptualization of ideas related to the knowledge they have.

H₂: Financial knowledge affects Financial Attitudes.

To have financial knowledge, it is necessary to develop financial capabilities (financial tools). Financial tools are a form of financial behavior in decision making (Aminatuzzahra, 2014). A person who has financial knowledge tends to behave financially in ways that are financially responsible (Hilgert *et al.*, 2003). This research shows that financial knowledge and financial behavior have a positive effect. These results support behavioral financial theory that uses cognitive processes (human mental skills in understanding and recognizing things around) in management and problem solving in decision making. The more mentally skilled a person (one's knowledge of finances is high), the better the management and problem solving in making investment decisions. This study argues that the higher a person's knowledge in managing finances, the better the level of planning and decision making in investing.

H₃: Financial Knowledge affects Investment Decision.

Income is the amount of real income from all household members that is donated to meet the needs of both the individual and the household (Erwin & Karmini, 2012). Income is income that comes from a main or a side job,

in the form of salary, rent or in other forms to meet the needs or desires that make you happier (Vera-Toscano et al., 2006).

H₄: Income affects Financial Behavior.

By having a good income, individuals will be able to manage finances well too. Without implementing a good financial attitude, it is felt that it will be difficult for individuals to have a surplus of money allocated for future savings, let alone have the capital to invest. Attitudes are usually measured by individual responses to their opinions on money, while financial management behavior refers to how individuals behave in relation to personal finances as measured by the individual's actions. Previous research that discussed the effect of the influence of financial attitudes on financial management behavior has been studied by several researchers including Herdjiono & Damanik (2016) and Bhushan & Medury (2013).

H₅: Income affects Financial Attitudes.

According to the investment dictionary personal income is the total annual gross income of an individual that comes from wages, business enterprises as your "profit before tax" are used in the calculation of individual adjusted gross profit for income tax purposes. The components derived from total income are wages and salaries. In this study, income is used to determine whether there is an influence on investment decisions. Based on the results of research conducted by the author, data on people's income is obtained by examining the total income from wages and salaries of respondents according to the opinion of Ida & Dwinta (2010). In other words, the higher the income, the better the person's investment decision. So it can be said that individuals who have higher incomes will have the opportunity to invest better than those who have lower incomes. Likewise, a higher income can provide an opportunity to invest because there may still be a surplus of income. A person's income has an influence on the management of their personal finances, the more their income, the greater their consideration for making investment decisions.

H₆: Income affects Investment Decisions.

According to Robbins & Judge (2007), self-control is defined as the degree to which individuals believe that they are determinants of their own destiny. Internal are individuals who believe that they are in control of whatever happens to them, while external are individuals who believe that whatever happens to them is controlled by outside forces such as luck and opportunity. Ajzen (1991) argues that there are external factors that indirectly influence attitudes toward behavior, subjective norms, perceived behavioral control against behavioral intentions. These factors are personality characteristics and situational factors. Research conducted by (Arianti, 2017; Moreland, 2018; Smith *et al.*, 2019) found evidence that locus of control has a positive effect on financial behavior.

H₇: Self-control affects Financial Behavior.

Financial Attitudes lead to individual thinking, income and individual judgment about financial practices. Individuals who are rational and confident in financial matters will affect their self-control. Because basically, locus of control refers to the extent to which an individual is able to believe that he can control events that affect his life. This is supported by research conducted by Hayhoe *et al* (1999) which states that there is a positive relationship between financial attitudes and financial levels. Thus, it can be said that a person's financial attitude is also a factor that affects how a person controls himself.

H₈: Self-control affects Financial Attitudes.

The Influence of Self-Control on Investment Decisions. According to Robbins & Judge (2007) Self-control is related to a person's level of confidence about events, fate, luck and destiny that occur to him. Self-control in this study is used to determine its effect on investment decisions. In measuring the level of influence of Self-Control on investment decisions, the concept of Rotter is used which has four basic concepts, namely potential behavior, expectations and reinforcing value.

H₉: Self-control affects Investment Decision.

Investment is an activity to invest in order to get a profit. Byrne (2007) in Sari (2017) also found that low financial knowledge will lead to low financial behavior and will have an impact on making wrong financial plans, and cause bias in the achievement of welfare when they are no longer productive. In this case, financial behavior has an important influence on a person's decision to invest. In addition, broad knowledge skills will make it easier for someone to make decisions to invest and financial literacy is important in managing finances well. Someone who decides to invest will certainly have a better effect in terms of financial management. This research is in line with research by Putri & Rahyuda (2017) which states that the effect of financial behavior on individual investment decision behavior means that the higher one's financial behavior, the better the behavior of individual investment decisions.

H₁₀: Financial Behavior affects Investment Decisions.

Financial attitudes are defined as states of mind, opinions and judgments about personal finances that are applied to attitudes. Financial attitude is also defined as the application of financial principles to create and maintain value through appropriate decision making and resource management. Therefore, financial attitudes affect investment decisions (Humaira & Sagoro, 2018). This study argues that the better the application of financial principles in managing one's finances, the better the level of planning and decision making in investing.

H₁₁: Financial attitudes affect Investment Decisions.

2. Method

The type of research used in this research is quantitative research. According to Sugiyono (2017), quantitative research methods are research methods based on the philosophy of positivism, used to research on certain populations or samples, data collection using research instruments, quantitative or statistical data analysis, with the aim of testing predetermined hypotheses. While the data used in this study consisted of two, namely primary and secondary data. In this study, the population that will be used is employees of productive age in Jakarta aged 25-55 years. The number of samples taken in this study amounted to 100 respondents and calculated using the Lameshow formula, this is because the population is unknown or infinite. Collecting data in this study through distributing questionnaires to productive age employees in Jakarta through online surveys. The questionnaire distributed is closed, that is, respondents are only given the opportunity to choose the answers that have been provided according to their opinion. The questions in the questionnaire and their answers using a Likert scale. This study uses Financial Knowledge, Income, and Self-Control as independent variables, then Investment Decisions as the dependent variable, then Financial Behavior, and Financial Attitudes as intervening variables.

2.1 Research Design

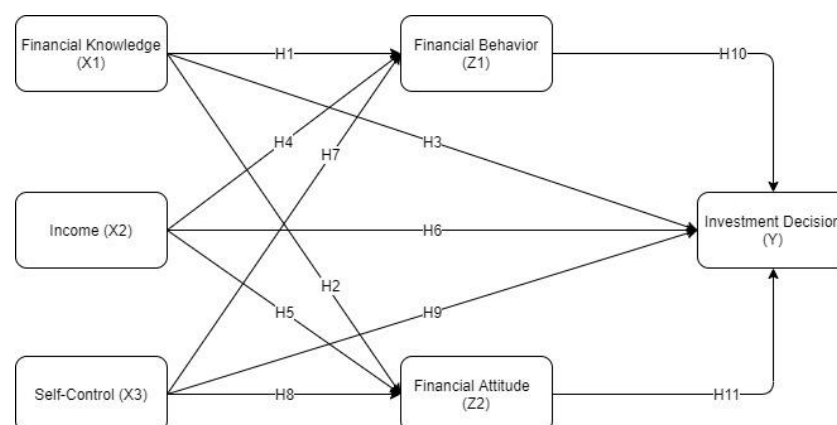


Figure 1: Research Framework

2.2 Structural Equation Modelling (SEM) Analysis

In this research, data processing and analysis uses the Partial Least Square (PLS) approach. PLS is a component or variant based Structural Equation Modeling (SEM) equation model. According to Ghozali (2006), PLS is an alternative approach that shifts from covariance-based to variant-based SEM approaches. Covariance-based SEM generally tests causality and theory while PLS is more of a predictive model. PLS is a powerful analytical method, because it is not based on many assumptions. For example, the data must be normally distributed, the sample does not have to be large. Data analysis in this research is Outer Model Analysis, Inner Model, and Hypothesis Test.

3. Results

3.1 Outer Model Analysis

3.1.1 Convergent Validity

Table 1: Outer Loading Table

Indicators of Variabel	Outer Loading	Validity	Indicator Evaluation
ID1	0,767	0,700	Valid
ID2	0,852	0,700	Valid
ID3	0,870	0,700	Valid
ID4	0,857	0,700	Valid
SC1	0,724	0,700	Valid
SC2	0,847	0,700	Valid
SC3	0,856	0,700	Valid
IN1	0,938	0,700	Valid
IN2	0,917	0,700	Valid
IN3	0,885	0,700	Valid
FK1	0,827	0,700	Valid
FK2	0,867	0,700	Valid
FK3	0,740	0,700	Valid
FK4	0,869	0,700	Valid
FK5	0,806	0,700	Valid
FK6	0,777	0,700	Valid
FB2	0,858	0,700	Valid
FB3	0,750	0,700	Valid
FB8	0,863	0,700	Valid
FA1	0,831	0,700	Valid
FA2	0,822	0,700	Valid
FA3	0,722	0,700	Valid
FA4	0,740	0,700	Valid
FA5	0,804	0,700	Valid

The Outer Model measurement model for individual reflective indicator blocks is said to be high if it correlates more than 0.70 with the construct to be measured. However, for research in the early stages of developing a measurement scale the loading value of 0.50 to 0.60 is considered sufficient (Ghozali, 2013). So it can be said that the outer loading above has met Convergent Validity. Table 1 above shown that each indicators for every variable has outer loading value above 0.7, so it can be said that all of the indicators within each variables is valid for further analysis.

Table 2: Average Variance Extracted (AVE)

Variables	AVE Value	AVE Evaluation
Investment Decision	0,702	Valid
Self-Control	0,658	Valid
Income	0,835	Valid
Financial Knowledge	0,666	Valid
Financial Behavior	0,681	Valid
Financial Attitude	0,616	Valid

The indicator is considered valid if it has an AVE value above 0.5 or shows that all outer loading dimensions of the variable have a loading value above 0.5 so that it can be concluded that the measurement meets the convergent validity criteria (Chin, 1995). Through measurement (outer loading), it states that all variables and indicators meet the criteria so that they are declared valid with a critical value above 0.5.

3.1.2 Discriminant Validity

Table 3: Cross-Loading Table

Indicators of Variabel	Investment Decision	Self-Control	Income	Financial Knowledge	Financial Behavior	Financial Attitude
ID1	0,767	0,227	0,160	0,367	0,294	0,345
ID2	0,852	0,205	0,102	0,507	0,232	0,356
ID3	0,870	0,274	0,120	0,489	0,304	0,456
ID4	0,857	0,287	0,177	0,534	0,353	0,419
SC1	0,166	0,724	0,293	0,218	0,484	0,338
SC2	0,334	0,847	0,221	0,382	0,467	0,346
SC3	0,227	0,856	0,379	0,429	0,593	0,572
IN1	0,182	0,286	0,938	0,304	0,374	0,377
IN2	0,120	0,305	0,917	0,284	0,398	0,364
IN3	0,150	0,431	0,885	0,276	0,410	0,371
FK1	0,422	0,420	0,380	0,827	0,413	0,500
FK2	0,522	0,382	0,281	0,867	0,443	0,413
FK3	0,418	0,247	0,189	0,740	0,346	0,409
FK4	0,576	0,425	0,302	0,869	0,496	0,437
FK5	0,386	0,275	0,287	0,806	0,428	0,375
FK6	0,455	0,348	0,082	0,777	0,399	0,366
FB2	0,357	0,519	0,342	0,455	0,858	0,539
FB3	0,184	0,518	0,385	0,341	0,750	0,421
FB8	0,319	0,552	0,350	0,478	0,863	0,534
FA1	0,470	0,459	0,350	0,445	0,518	0,831
FA2	0,507	0,456	0,383	0,444	0,450	0,822
FA3	0,258	0,335	0,166	0,338	0,445	0,722
FA4	0,236	0,400	0,272	0,287	0,450	0,740
FA5	0,299	0,421	0,369	0,455	0,526	0,804

From the table data above, it can be seen that the comparison, the outer loadings of the indicator in the associated construct must be greater than any cross-loadings of the other constructs. So that latent variables can be said to predict their indicators better than other latent variables.

Table 4: Formell-Larcker Criterion

Variables	Investment Decision	Income	Financial Knowledge	Financial Behavior	Financial Attitude	Self-Control
Investment Decision	0,838					
Income	0,298	0,811				
Financial Knowledge	0,165	0,374	0,914			
Financial Behavior	0,573	0,434	0,315	0,816		
Financial Attitude	0,353	0,641	0,432	0,519	0,825	
Self-Control	0,473	0,533	0,406	0,512	0,607	0,785

The Fornell-Larcker criterion is a second approach to assessing discriminant validity. It compares the square root of the AVE value with the latent variable correlation. In particular, the square root of each AVE construct must be greater than the highest correlation with the other constructs. An alternative approach to evaluating the Fornell-Larcker criterion results is to determine whether the AVE is greater than the squared correlation with other constructs. The logic of the Fornell-Larcker method is based on the idea that constructs share more variance with related indicators than with other constructs. Based on the table above, it can be seen that the AVE value is greater than the quadratic correlation with other constructs. This shows that all the constructs in the estimated model meet the criteria for discriminant validity.

3.1.3 Reliability Test

Table 5: Reliability Test Table

Variables	Cronbach's Alpha value	rho_A	Composite Reliability
Investment Decision	0,858	0,870	0,904
Income	0,741	0,766	0,852
Financial Knowledge	0,901	0,901	0,938
Financial Behavior	0,899	0,905	0,922
Financial Attitude	0,764	0,775	0,864
Self-Control	0,846	0,867	0,889

Furthermore, the reliability test can be seen from the Cronbach's Alpha value and the Composite Reliability value. To be able to say that a statement item is reliable, then the Cronbach's alpha value must be above 0.6 and the composite reliability value must be 0.7. So it can be concluded that all constructs meet the reliability value because Cronbach's Alpha and Composite Reliability are above the reliability test standard.

3.1.4 Multicollinearity Test

Table 6: Inner Variance Inflation Factor (VIF) Value

Inner VIF Values	Investment Decision	Income	Financial Knowledge	Financial Behavior	Financial Attitude	Self-Control
Investment Decision						
Income	1,827				1,334	1,334
Financial Knowledge	1,297				1,203	1,203
Financial Behavior	1,511				1,274	1,274
Financial Attitude	2,214					
Self-Control	1,846					

The manifest variables or indicators in a formative block must be tested for their multicollinearity. Testing whether or not multicollinearity occurs between indicators in the formative block uses the VIF value. If the VIF value

above 10, there is collinearity between indicators in one formative block. From the table results, it shows that the data above is free from multicollinearity.

3.2 Inner Model Analysis

Table 7: R-Square Table

Variables	R-Square	Adjusted R-Square
Investment Decision	0,379	0,356
Financial Behavior	0,508	0,497
Financial Attitude	0,410	0,397

The table above shows that the R Square from Investment Decision variable has a moderate value, which is 0.379, which means that the effect of independent variables on investment decisions is 37.9%, the rest is influenced by other variables not explained in the study. Meanwhile, the financial behavior variable reached 0.508 or 50.8% and the financial attitude was 0.410 or 41%.

3.3 Hypothesis Testing

Table 8: Hypothesis Testing Result

Hypothesis	Original Sample	Average Sample	Standard Deviation	T-Statistics	P-Values	Results
Financial Knowledge ---> Financial Behavior	0,263	0,261	0,074	3,566	0,000	H ₁ Accepted
Financial Knowledge ---> Financial Attitude	0,311	0,295	0,098	3,183	0,002	H ₂ Accepted
Financial Knowledge ---> Investment Decision	0,468	0,467	0,083	5,657	0,000	H ₃ Accepted
Income ---> Financial Behavior	0,176	0,175	0,069	2,549	0,011	H ₄ Accepted
Income ---> Financial Attitude	0,185	0,190	0,075	2,481	0,013	H ₅ Accepted
Income ---> Investment Decision	-0,086	-0,083	0,085	1,011	0,312	H ₆ Rejected
Self-Control ---> Financial Behavior	0,460	0,465	0,076	6,095	0,000	H ₇ Accepted
Self-Control ---> Financial Attitude	0,329	0,345	0,086	3,831	0,000	H ₈ Accepted
Self-Control ---> Investment Decision	-0,015	-0,017	0,088	0,174	0,862	H ₉ Rejected
Financial Behavior ---> Investment Decision	-0,017	-0,023	0,099	0,174	0,862	H ₁₀ Rejected
Financial Attitude ---> Investment Decision	0,287	0,296	0,111	2,578	0,010	H ₁₁ Accepted

It can be seen in the table above that a population has a relationship between one variable and another variable. It can be seen in the path coefficient (rho) by looking at the value of the original sample and the statistical T value as a statement of the significance level of the relationship between one variable and other variables. The final diagram model image is based on the results of the hypothesis testing results.

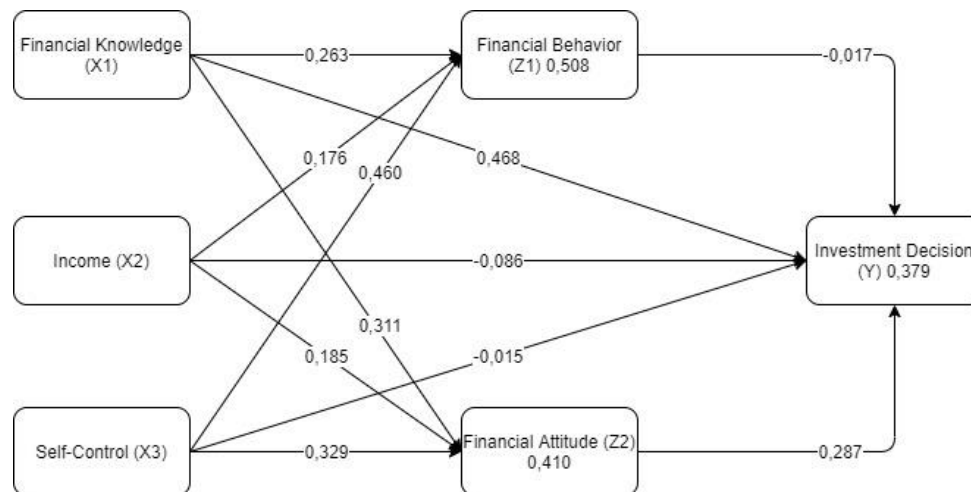


Figure 2: Relationship between variables

4. Discussion

Financial Knowledge influences Financial behavior, this is in line with previous research that has been conducted (Arianti, 2017; Moreland, 2018; Smith *et al.*, 2019). Financial Knowledge influences Financial Attitudes. This is in line with research conducted by Tang & Baker (2016), and Garber & Koyama (2016) which state that good financial knowledge in individuals will encourage the formation of individual positive attitudes towards financial attitudes. This attitude is formed from the conceptualization of ideas related to the knowledge they have. Financial knowledge influences investment decisions, which is in line with research conducted by Silvy & Yulianti (2013) which states that financial knowledge and financial management influence investment decisions. A person who has financial knowledge tends to behave financially in financially responsible ways. These results support behavioral financial theory that uses cognitive processes (human mental skills in understanding and recognizing things around) in management and problem solving in decision making. The more mentally skilled a person (one's knowledge of finances is high), the better the management and problem solving in making investment decisions. This study argues that the higher a person's knowledge in managing finances, the better the level of planning and decision making in investing. Income affects financial behavior, this result is in line with research conducted by Vera-Toscano *et al* (2006). Income affects financial attitudes, this result is in line with research conducted by Herdjiono & Damanik (2016), which explains that there is an influence between financial attitudes and income. Income does not influence investment decisions. Self-control affects financial behavior, this result is in line with research conducted by previous research (Arianti, 2017; Moreland, 2018; Smith *et al.*, 2019). Self-control affects financial attitudes, where this result is in line with research conducted by Hayhoe *et al* (1999). Self-Control does not affect the Investment Decision. Financial Behavior does not influence Investment Decisions. Financial attitudes affect decisions, investment which is in line with research conducted by Humaira & Sagoro (2018) which states that financial attitudes are defined as states of mind, opinions and judgments about personal finances that are applied to attitudes. Financial attitude is also defined as the application of financial principles to create and maintain value through appropriate decision making and resource management. This study argues that the better the application of financial principles in managing one's finances, the better the level of planning and decision making in investing.

5. Conclusion

There is no influence of Self Control on Investment Decisions. There is an effect of Self Control on Financial Behavior. There is an effect of Self Control on Financial Attitudes. There is no effect of income on investment decisions. There is an effect of income on financial behavior. There is an effect of income on financial attitudes. There is an influence of financial knowledge on investment decisions. There is an influence of Financial Knowledge on Financial Behavior. There is an influence of Financial Knowledge on Financial Attitudes. There is no effect of financial behavior on investment decisions. There is an influence of financial attitudes on investment decisions.

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Conceptualizing Strategic Innovation in a Firm Context: A Theoretical Review and Research Agenda

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Abstract

The literature on strategic management recognizes the pivotal role played by strategic innovation as a strategic choice in organizations in order to create a sustainable competitive advantage. However, although there are emerging calls for the adoption of strategic innovation in a firm's strategic management process, the concept of strategic innovation is not well understood. The scanty empirical literature reviewed has methodological and conceptual gaps that affect the generalizability of findings even in similar contexts. In this paper, the authors have attempted to review Strategic Innovation and argued that the emerging phenomena from its deployment in firms invite the role of the firm structure and innovative capacity as the firm seeks to enhance its chances of survival in a rapidly changing firm context. The conceptual, theoretical and empirical literature reviewed identified diverse issues that present a case for a theoretical model suitable to advance the current understanding of strategic innovation and the emerging phenomenon in firms. This paper therefore proposes an integrated theoretical model conceptualizing strategic innovation in a firm context and identifies relevant implications for future research.

Keywords: Business Model, Firm Context, Innovative Capacity, Organizational Structure, Strategic Innovation

1. Introduction

The business environment is changing rapidly forcing organizations to change their operations in order to align their businesses to these changes. Changes that may affect today's businesses include, new technologies, threats from new entrants, mergers and acquisitions, deregulations and uncertainty (Iplik, Topsakal & Dogan, 2014; Adegbile, Sarpong & Meissner 2017). In such a dynamic and uncertain context, successful firms are regarded as those innovating since they recognize the need to create a sustainable competitive advantage so as to outsmart their rivals (Iplik et, al, 2014). These innovating firms try to develop strategies that may turnaround their businesses to ensure long term survival. Firms no longer strive to just create a competitive advantage but seek to create organizational skills and capabilities suitable to address the continuous environmental changes. Firms therefore require relevant strategies championed by competent leaders so as to develop reliable models that guarantee

survival. It is in this context that a strategic option focusing on innovation becomes a suitable choice for adoption in revitalizing the business models in use.

Strategic innovation has recently become a priority for the Top Management Teams (TMTs) in both the developed and developing economies (Yang, Wang, Zhu & Wu, 2012; Denicolai, Zucchella & Morelto, 2018). Irrespective of the type of industry, any successful firm with established products or services risks being sidelined unless its top managers understand the timing and how to develop a new model for their business (Christensen, 1997). Creative leaders use the innovative action to leverage on their internal organizational potential while continuously reviewing their business models in order to remain competitive (Abraham & Knight, 2001). Geroski (1998), posits that it is important not to think of innovation exclusively as a new technology but also as a way of transforming a firm's strategic innovation process for sustainability. For this reason, TMTs require the right competencies to be able to perform effectively and generate suitable capabilities for sustainable competitive advantage. This strategic innovation capability requires strategic thinking and an entrepreneurial mindset to initiate and manage the innovation process in a firm (Alvarez & Barney, 2007; Sanchez, Lago, Ferras, & Ribera, 2011; Kalay & Lynn, 2015).

Globally firms use their innovative capability to create a competitive advantage in the ever-changing business environment (Keupp, Palmié & Gassmann, 2011). Firms therefore require strategies oriented towards innovation and competent leaders to develop reliable models that can be implemented for survival as the firms' success has largely been perceived to be dependent upon generated capabilities more than any other resources (Greve, Hitt, Ireland & Camp 2002; Kodama 2017). In this context Strategic innovation has been considered within the strategic management scholarship as a type of innovation that has the capacity to effectively change a firm's business model (Dogan, 2017) and as a result continues to generate interest in the strategic management field due to this potential impact in redefining existing business models. Firms have for long recognized innovation as a strategic option suitable to improve their competitive advantage (Lopez-Nicolas & Merono-Cerdan, 2011). Hamel (2000) considered strategic innovation as a source of competitive advantage suitable for organizations intending to win in the new economy and creatively revitalize their strategy to remain competitive. This type of innovation has been described as one that follows the Schumpeterian perspective, focusing on innovation of the business model and breaking the industry rules of competition (Christensen, 1997; Kim & Mauborgne, 1999; Markides, 1999, 2006; McGrath, 2010; Teece, 2010; Yu & Hang, 2010; Kalay & Lynn 2015). Strategic innovation is holistic in nature and its focus goes beyond product innovation to encompass the firm's business strategy. While the creation of new products, services, processes or production systems is what is most commonly thought of in addressing the construct of innovation, it is now emerging that what really drives value creation is not merely the product innovation but the business model innovation (Chesbrough, 2010) and thus the reason for firms to consider adopting strategic innovation in their strategic management processes. However, the concept of strategic innovation and management of this innovation in a firm context is characterized by knowledge gaps and theoretical inconsistencies that do not support it (Porter, 1985; Keupp *et al*, 2011). The capacity for a firm to innovate starts with a clearly defined strategy and thus the emerging calls for the adoption of business models aligned towards strategic innovation for sustaining continual innovation of products and services (Pisano, 2015).

1.1 Statement of the problem

Although there are emerging calls for the adoption of strategic innovation and its integration in a firm's strategic management process and context, the concept of strategic innovation has not been very well understood. Despite the fact that Keupp *et al*, (2011) indicated that different scholars have identified a relationship between innovation and other management variables, very few reviews have been done on the construct of strategic innovation (Sammut-Bonnici & Paroutis, 2013). In addition, Palmer and Kaplan (2009), had earlier called on practitioners and researchers to offer suggestions that would enhance the understanding and implementation of strategic innovation. This call has remained unattended to given the status of the extant conceptual and empirical literature that indicates a gap and scarcity of literature regarding an innovative organizational behavior in a dynamic environment (Adegbile *et al*, 2017) and the creation of strategic innovation, systematic and routinized implementation of the innovation process (Ortt & Duin, 2008; Garrigos, Igartua & Signes, 2018).

The conceptualization of strategic innovation emerged from the literature on the managerial understanding of strategy and innovation (Mintzberg, Ahlstrand & Lampel, 1998) thus fueling the persistent lack of understanding. The concepts of strategy and innovation have been studied and advanced as separate concepts since both appear at different levels in the strategic management process. Strategy is mostly undertaken at corporate level while innovation is pursued at the business unit level and more specifically at the product level. Krinsky and Jenkins (1997) argued that with the increased importance of innovation in the performance of firms, both researchers and practitioners are now compelled to combine innovation and corporate strategy so that innovation as a form of strategic option can be pursued at the appropriate level of strategy in firms.

This state of the conceptual literature has also reflected on practice in the industry where in spite of the call to adopt strategic innovation as a strategic choice, some firms still do not understand the importance of integrating their business models to the emerging trends in technology to remain competitive (Markides & Oyon, 2010). It has been argued that competition among firms is about a business model innovation that disrupts the market and industry structure (Zhang, Daim & Zhang, 2018). Thus, firms interested in enhancing their competitiveness need to focus on revitalizing their business models. Strategic innovation fits well in this since the phenomenon arising from its deployment requires firms to review their products or services and organizational structures (Schiavi & Behr, 2018).

In considering adoption of strategic innovation in practice, the reviewed literature views strategic innovation as a strategic choice influenced by factors in the firm's context both within and without. As a typical strategic management phenomenon, the internal conditions defining the firm's climate facilitating or constraining innovation are critical while the strategic option when considered as a strategic resource is applied to help firms confront the realities of the external dynamic environmental settings. In a firm context where the organizational structure allows for autonomy, employees influence the work environment, are free to generate new ideas, seek and apply new knowledge that support the pillars of successful innovations (Pertusa-Ortega, Molina-Azoin & Claver-Cartes, 2010), the climate may be suitable for innovation thus giving the firm an ability to innovate in a way that redefines the business model in response to external environmental demands. On the other hand, centralization limits innovative behavior and organizations find it difficult to generate suitable responses for the demanding external environment (Prajogo & McDermott, 2014; Dedahanov, Rhee & Yoon, 2017). Thus, in discussing integration of strategic innovation, the conditions arising from the internal context as sustained by the firm's work structure that may facilitate or constraint innovation need consideration (Gurkan & Tukelturk, 2017). Although it can be argued that innovation and creativity are considered key to achieving a sustainable competitive advantage (Nybakk & Jensen, 2012), there have been concerns raised as to whether most firms understand the process so as to manage its antecedents and inhibitors. Several authors have highlighted some antecedents to an innovative climate. For example, autonomy, leadership, sufficient resources and innovation behavior or culture (West & Farr, 1989), information flow and motivated individuals (Amabile *et al*, 1996; Sundgren *et al*, 2005), trust, involvement, space for risk-taking, support for new ideas, freedom and space to debate (Tidd & Bessant, 2009). In spite of this, Pisano (2015) posits that although firms invest heavily, innovation initiatives remain a challenge especially where some of these initiatives fail while others are viewed as unsustainable. He further adds that this failure stems from a lack of innovation strategy aligned to the business strategy (Pisano 2015). Thus, there is need for a scholarly attempt to explore the construct of strategic innovation with a view to highlighting its nature that organizations can rely upon to sustain the momentum for continual innovation towards sustained superior performance.

In view of this emerging call, this paper undertook to review the extant literature on strategic innovation so as to bring out its defining features suitable to explain its phenomenon when deployed in an organizational context. The paper addresses three objectives, first the paper reviews the extant conceptual, theoretical and empirical literature on strategic innovation and its potential for a firm strategic management phenomenon. Secondly, the paper identifies the emerging phenomenon from the deployment of strategic innovation in the firm context and thirdly, the paper proposes an appropriate theoretical model that describes the phenomenon brought about by the application of strategic innovation in the firm context within a changing business environment.

The authors consider the current paper to be critical in the strategic management field. First, the paper addresses identified knowledge gaps that arise from the manner in which the construct of strategic innovation has evolved affecting the current understanding, conceptualization and subsequent application in organizations. Secondly, given the current developments characterizing most markets and industries, adoption of strategic innovation as a strategic option is considered suitable to revitalize the business models in a way that maturing markets and products tending towards decline can find a solution given the dilemma such development pose to the management of organizations. Thirdly, by integrating the aspects of strategic innovation, a clear understanding of the construct is provided borrowing from a multidisciplinary point of view. In doing so, the paper enriches the current understanding of the construct in that its conceptualization is made clear and the emergent phenomenon arising from its deployment by firms in responding to dynamic business contexts. We consider this as important in not only helping describe the phenomenon but also setting the direction for future research. Towards this, the authors suggest an integrated theoretical model that is underpinned in a multidisciplinary theoretical grounding and identifies lines of relationships that scholars can empirically investigate.

2. Review of Literature

To respond to the papers' objectives as stated above, the paper presents a summary of the extant literature on the constructs of strategic innovation, innovative capacity, organizational structure and firm performance as emergent phenomena upon the deployment of strategic innovation in a firm. A further discussion is on relevant theories underpinning the constructs, the empirical work and emergent issues.

2.1 Strategic innovation

To respond to the call raised in the problem statement, the authors trace the seeds that lay the ground for the current understanding of strategic innovation to have been sown through the basic concepts that deal with the nature of innovation. Two of these concepts are vital, invention and innovation. Robert and Tucker define invention as creating an idea and bringing it to existence (as cited by Ouma & Kilika, 2018). Grant defines invention as the creation of products and processes through the development of new or a new combination of existing knowledge (as cited by Grafstrom & Lindman, 2017). Grant argues that mostly inventions are outcomes from existing knowledge. He further asserts that innovations are initial commercialization of inventions by producing and marketing a new good or service or by using a new method of production whereas, an innovation can be a package of several inventions.

Extant literature presents various categories of innovation (Garcia & Calantone, 2002). The perspective given by Iplik *et al.* (2014) discusses five types of innovation that are widely used by both researchers and practitioners. These include; product or service innovation, that involves the development of new products, process innovation that involves implementation of new or improved production methods or systems, marketing innovation that focuses on the identification of potential markets and new customers to increase the firms market share, organizational innovation thinking that supports the creation of new administrative structures, workplace and external relationships among others and business model innovation also referred to as strategic innovation. Strategic innovation is grounded on the two dichotomies of innovation suggested by (Das, Verburg, Verbraeck & Bonebakker, (2018) in their perspective that grouped innovations into two categories, incremental and radical innovation. Incremental innovation involves minor changes while radical innovation incorporates technological changes. According to Gobble (2016), a radical product innovation involves a new technology with products in both the existing market and emerging market. On the other hand radical service innovation involves major organizational changes that lead to shifts in the market structures and behavior changes in customers (Das *et al.*, 2018).

The conceptualization of the construct of strategic innovation has been traced to the work of Markides, (1997) that considers strategic innovation as a type of innovation that focuses on the reformation of business and a renewed competing style that is beyond being better than the existing competition. Other scholars who added to this include, Schlegelmich, Diamantopoulos and Kreuz (2003) who defined strategic innovation 'as a fundamental re conceptualization of business models and the reshaping of existing markets by breaking rules and changing the

nature of competition'. A business model articulates the logic and provides data and other evidence that demonstrates how a business creates and delivers value to customers. It also outlines the architecture of revenues, costs, and profits associated with the business enterprise delivering that value (Teece, 2010). Kodama (2017) adds that strategic innovation is a dynamic view of strategy that enables firms to maintain competitiveness and establish sustainable growth. The application of innovation on corporate strategy was then referred to as strategic innovation (Geroski, 1998; Krinsky & Jenkins, 1997; Markides, 1997, 1999; Martinsons, 1993). Hamel referred to this concept as the 'strategy innovation' which he defined as the 'capacity to re-conceive the existing industry model to create new value for customers, make competition irrelevant and create wealth for other stakeholders'. Other concepts include value innovation that renders competition irrelevant, creation of new value and new markets (Kim & Mauborgne, 1999b). The current understanding of strategic innovation has therefore borrowed from the various conceptualizations of the concept. Thus we adopt the description advanced by Schlegemilch, (2003) that observed that: '*Strategic innovation is the fundamental reconceptualization of the business model and the reshaping of existing markets (by breaking the rules and changing the nature of competition) to achieve dramatic value improvements for customers and high growth for companies.*'

Although the definition appears very clear, scholars have continued to use strategic innovation interchangeably with innovation strategy contradicting the understanding of the two constructs. This notwithstanding, the distinction among the two is conceptually clear. Katz, du Preez and Schutte (2010) considered an innovation strategy as "an incrementalist, functional, predetermined plan governing the allocation of resource to different types of innovations in order to achieve a company's overall corporate strategic objectives and, a decision framework in its corporate strategy and objectives in order to focus on the business of the future" (as cited in Ouma & Kilika, 2018). Varadarajan, (2018) commented that understood in this manner, it is fundamentally an organization's focus on innovation types aligned to the corporate strategy level. Pisano, (2015) on the other hand pointed that an innovation strategy must be linked to the firm's business strategy and value proposition which raises the need to address two other critical components: how to create the value capture and determining the types of innovations that the firm should pursue. This argument is advanced due to the requirements of an innovation strategy. Pisano (2015) further observed that Innovation strategy requires a continuous improvement, experimentation, learning and adaptation without which a firm cannot build its capacity to innovate. Thus, borrowing from these comparisons of the two terms, it is clear that innovation strategy is executed within the existing model while strategic innovation ushers in a complete change not only in the firm but also in the entire industry. With this understanding then, we point out that a strategic innovation is to be approached by an organization as a type of innovation strategy with transformational effects on the markets and industries that include, new industries, new products, promotion, distribution, pricing and new markets (Varadarajan, 2018).

From the consensus established from the different perspectives of the understanding of strategic innovation, the authors are of the opinion that strategic innovation is more of the firm's 'redefined business model' that can be regarded as the heartbeat of every enterprise. Arising from this therefore are three dimensions or components of strategic innovation; Value creation, Value proposition and Value capture.

Value Creation as a component of innovation highlights new capabilities that enable a firm to reconfigure both its internal and external resources, new technology and equipment, new processes and structure and new partnerships that include customers and suppliers. The extant literature demonstrates the importance of strategic innovation as a process that creates growth strategies with significant value for customers, consumers and the corporation (Palmer & Kaplan, 2009). Karia (2013) added that strategic innovation has a clear focus to achieve a competitive advantage through improved customer value and new markets while, Yang (2014) emphasized that strategic innovation is a key factor that influences firm performance globally and ultimately increases value to their customers. Strategic innovation brings about a creative strategic positioning through new products, services and business models and is a dynamic view of strategy that enables a firm to maintain its sustainable competitive advantage for sustainable growth (Kodama, 2018). The underlying factor is that a firm's performance is dependent on controllable internal antecedents like the organizational structure and the management aspects of the firm (Sousa, Martínez-López & Coelho, 2008). To this end, firms need to continuously innovate to sustain their positions through either incremental or radical innovations. To advance in this, firms must review their existing

capabilities to reposition their businesses and therefore survival is guaranteed through the constant reflections on performance (Schoemaker, Heaton & Teece, 2018).

Value proposition involves new offerings, new customer segments, new channels and new customer relationships. Considering the importance of managing the strategic innovation process, Palmer and Kaplan, (2009) presented, seven strategic innovation dimensions that support the management of strategic innovation in a firm. These are; a managed innovation process that considers all the activities from the innovation initiation to implementation (Daft & Albers, 2013), strategic alignment, industry foresight (Markmann & Heiko (2015), customer and consumer insight (Kindstrom & Kowalkowski 2014), core technological and competence leveraging, organizational readiness and finally a disciplined implementation. Even though literature gives highlights on how to manage the firm's strategic innovation, for a systematic understanding and planning of this process, Sammut-Bonnici and Paroutis, (2013) in a debate on the dominant logic of strategic innovation argued for the need to have a more systematic approach. Given the nature of strategic innovation, firms require specific skills set, deliberate planning and implementation in order to get the benefits of any innovation (Bucherer, Eisert & Gassmann 2012; Cresswell & Sheikh 2013).

Value capture involves the new revenue model and new price or cost structure (Lehmann-Ortega & Schoetti, 2005; Teece, 2010; Clauss 2016; Sniukas, Lee & Morasky 2016). It defines how the value propositions are translated into revenue. Value capture demonstrates how a firm acquires resources that cover its costs and achievement of profits that lead to sustainable performance (Teece, 2010). Literature indicates that the ability of firms to use different mechanisms to capture value from their innovations would vary from technological to industry context (James, Leiblein & Lu, 2013). An integration of these dimensions defines a firm's business model that relates to the entire business system (Clauss 2016; Sniukas, Lee & Morasky 2016).

An immediate implication arising from the understanding so far advanced on the construct of strategic innovation is indicating that adoption of strategic innovation gives rise to some form of innovative capability at both firm and industry levels (Teece, 2017). The key question arising from this implication is where this capability derives from, its drivers, key dimensions and components as these are key to guiding how theoretically it may be modeled and practically applied. From the reviewed literature, the authors observe that the nature of innovation strategy may be facilitated from two sources, (i) external environmental conditions and (ii) internal organizational conditions. With regard to where innovation derives from as well as the drivers of strategic innovation, Schlegelmilch, *et al*, (2003) suggested a list of four drivers of strategic innovation that comprise of strategy process, culture, people and resources. Using this as a foundation, Mckenzie (2014) identified indicators under each driver as follows; Strategy process indicators are; role of strategy, strategy frontier and strategy development process, Culture indicators are; values, beliefs and innovative culture, People indicators are Staff characteristics, staff management, role of top management and leadership, networks and partnerships and Resource indicators are technology resource, finance resources. Following a similar approach, Iplik et al, (2014) established that strategic innovation in the large manufacturing firms can be operationalized by considering innovative outputs such as; cost savings, achieving competitive advantage, new markets, improved service quality, decrease delivery time of service, follow up on technology and increased customer satisfaction. These factors appear to depend to a large extent on the configuration adopted by the organization to organize and coordinate work through its organization structure. The organization structure will thus be an important internal organizational condition necessary to drive and sustain innovation.

The structure is required in providing conditions for sustaining innovation in that the structure determines how people work in an organization. The way people work to bring out innovations and sustain a level of creativity is either facilitated or inhibited by the structural dimensions of formalization, standardization, specialization and centralization (Burns & Stalker, 1961; Lawrence & Lorsch, 1967; Mintzberg, 1979). For example, from extant literature on decentralization of relevant information for decision making indicate that organizational structures can optimize efficiency in organizations (Dessein & Santos 2006). To manage the strategic innovation process calls for an appropriate organizational structure for a smooth implementation and facilitation of organizational learning that allows for access to knowledge for improved capacity to innovate (Martínez-León & Martínez-García, 2011).

In terms of the role of the external environment, we point at the firm's competitive environment that has been recognized as a key distinguishing characteristic in strategic management (Porter 1980). Machuki and Aosa, (2011) argue that the external environment provides three dimensions comprised of dynamism, complexity and munificence within which both threats and opportunities are suitable to be a source of innovation. Teece, (2010) highlights key drivers that lead firms to innovate or redefine their business models as globalization and technological advancements. This advancement enables a firm to introduce discoveries in the market faster than their competition (Teece 2010). Other drivers include competition and changing customer needs and changing regulation (De Reuver, Bouwman, & MacInnes, 2009).

With the stage set by both the internal and external conditions, we note that deployment of the strategic innovation embracing value creation, value proposition and value capture will enable a firm to generate a satisfactory level of innovative capability. This emerges as an important aspect of the discussion on strategic innovation given observations that have indicated that even though the types of innovation discussed are likely to give rise to some form of innovative capability, a number of scholars have noted that the innovation capability does not necessarily translate into innovation outcomes because these capabilities need to be exploited through a supportive organizational context to improve performance (Grabner, Posch & Wabnegg 2018). Given this challenge, an attempt to ensure that firms benefit from their innovation initiatives, strategic management comes into play as a management technique that organizations use to plan for the future of an organization and it includes the creation of a vision through the development of long-term strategies. Several organizations have realized that strategic planning is a fundamental aspect in helping them cope with sudden contingencies, both internally or externally. To improve innovation performance, firms need to have a strategy, systems, culture and collaboration with other firms which require a strategic perspective and thus leading to the adoption of the construct of strategic innovation (Schroeder, 2013).

In conclusion of the discussion on strategic innovation, it is now emerging from the literature reviewed that application of strategic innovation has implications for the business model in a way that touches on both the organization's internal and external conditions (Wang & Kimble, 2016) Externally the conditions of external environment that create business opportunities become critical for consideration and internally within the firm, the conditions enacted to support the drive for innovation also need consideration if adoption of the construct of strategic innovation is to deliver credible value to an organization and sustain its competitive advantage. Thus from the review of the literature undertaken in the study, we deduce that consideration of three sets of factors is critical to understanding the outcomes and context of the deployment of the construct of strategic innovation as : the internal conditions leaning towards the firm's innovation capacity, the context of the firm's innovation and the outcomes of the firm's innovation. It is therefore evident that the firm's potential to sustain the quest for innovation based on its outcomes to the organization largely depends on the firm's innovative capacity and strategic innovation influences the level of a firm's innovative capacity that is a critical factor that affects firm performance since innovative capacity helps define long term strategies that determines a firm's survival (Noble, Sinha & Kumar, 2002) and in creating sustainable competitive advantage. We suggest that in line with this reasoning a consideration of the three related constructs is important; firm's innovative capacity, firm's organizational structure and firm performance.

2.2 Firm's innovative capacity

Innovative capacity can be considered as a form of capability that may derive from the firm's strategic innovation as a strategic choice. One of the key requirements for a firm's survival in the context of innovation is the level of innovative capacity. Fundamentally an innovative firm must have an innovative firm culture that facilitates continuous creativity. Barney (1991) asserts that the ability to innovate as an internal resource of a firm is a critical competence to any firm. Innovativeness explains the firm-level orientation towards innovation (Hurley & Hult, 1998) and ability to increase a firm's growth that emanates from the innovative adaptation and extension of the firm's resource base (Wernerfelt, 1984). Literature indicates that the concepts of innovation and innovativeness are often confused and their perspectives used interchangeably (Garcia & Calantone, 2002). Koc (2007) argued that Innovative capacity refers to the firm's capacity to engage in innovation that involves new processes, development of new products, or generation of new ideas. Innovativeness provides flexibility to a firm to engage

in different options that lead to survival in the long term (Banbury & Mitchell, 1995). From the above definitions, innovation capacity and innovative capacity seem to imply the same thing because innovation capacity is both a process and an outcome (Achi, Salinesi & Viscusi 2016).

The components of innovative capacity as discussed by Gans and Stern, (2003) are noted as a *common innovation infrastructure* that supports innovation in the firm and industry of choice. This includes financial and human resources aligned to a firm's technological advances. Secondly, *cluster-specific innovation environment* where firm's level of innovative intensity or vitality is dependent on specialized inputs, context for firm strategy and rivalry, local and sophisticated demand conditions, associated industries and finally the *quality of firm linkages* that enhance both upstream and downstream technical advances to improve productivity. This includes both formal and informal organizations and networks. Though related to these components, Neely and Hii, (2012) asserted that a firm's innovative capacity is determined by culture, internal processes considered and the external environment.

Since innovations are a critical factor to a firm's competitiveness, growth and survival, most firms will seek mechanisms and sources to attain high levels of innovativeness in order to face the stiff competition (Nieto & Santamaría, 2006). Chiesa *et al.*, (1996), (as cited in Koc 2007) notes that innovative capacity has very many factors and dimensions and it would not be practical to include all of them in an empirical study. As a result, a researcher should select factors that are relevant in a given context. Koc (2007) noted that innovative capacity in the large manufacturing firms in Turkey was driven by the technological environment or technology strategy, idea quality, idea generation and development technological acquisition and exploration. However, Suarez-Villa (2007) noted that inter-firm networks are critical to a firm's innovative capacity and subsequently lead to an impact at the national level. Marotti de Mello (2008) added that innovative capacity is a result of the inter-relationship between organizational culture, competence, resources and relationships with other firms. A continuous measurement of innovation capacity provides a comparison between firms, sectors or industries as sources of innovations (Suarez-Villa, 2007).

The firm's innovative capacity is theoretically considered a product of both the firm's infrastructure and the external conditions. The firm's infrastructure may be studied from the point of organizational structure. Given the importance of innovative capacity, a fundamental question a firm could ask is in regard to the decisions that concern the ideal innovative related structures that translate into performance outcomes. The successful innovating firms will always strive to consider structures that facilitate an innovative environment. It is important to note that the strategies that a firm can adopt to provide a competitive advantage can only be found in an appropriate organizational structure. Thus, there is the need to study how strategic innovation is influenced by the construct of organizational structure to subsequently affect firm performance.

2.3 Organizational structure

The deployment of strategic innovation in the firm context is dependent on the organizational design. The ability of a firm to innovate, presents challenges and opportunities to lead to new managerial practices and new organizational forms. In the Schumpeterian theory of innovation, Schumpeter (1950) visualized organizational changes that influenced the new products, processes, new markets, new business models as creative destruction that calls for a new way of doing things. As a result, this paper considers organizational structure as a construct of interest since it influences how this strategic choice is implemented. Chandler (1962) demonstrated this interest in his study that concluded that structure follows strategy. Subsequent attempts have continued to demonstrate the role of structure in providing a supportive climate for the implementation of innovative strategies. The earlier studies on structure focused on understanding its dimensions that offer potential for creating and sustaining this climate for successful strategy implementation (Burns & Stalker, 1961; Lawrence & Lorsch, 1967)

Mintzberg (1973) defines organizational structure as a way that work is divided, shared and coordinated while (Hold & Antony, 1991) adds that an organizational structure is a model that explains different relations in an organization. Organizations with less complex structures and an appropriate decentralization structure, have more effective supervision and improved company performance (Belassi & Fadlalla, 1998; Chang & Lung, 2002). Structure configures the context within which power and control are exerted, duties are fulfilled and strategic

options are formulated (Hunter, 2002; Spanos *et al.*, 2001). It influences resource allocation, favours internal and external communication, and strengthens organizational ability to respond to changes in business environment, to learn and innovate (Chen, Huang & Hsiao, 2010; Martínez-León & Martínez-García, 2011). The firm context therefore will influence the firm's level of innovativeness that will subsequently determine firm performance.

Extant literature exists on the multi-dimensional view of organizational structure. Schine (1971), (as cited in Ahmady, Mehrpour & Nikooravesh 2016), presents three dimensions of organizational structure, the hierarchy, functional and inclusion. The Aston group adopted the Weber's concept of bureaucracy since it was an ideal type of organization with different variables. The major variables identified were, specialization formalization, standardization, centralization and configuration. Burns and Stalker (1968) classified the organizational structures into mechanistic or organic depending on the levels of standardization, formalization and centralization. The highly mechanistic organizational structure with inherent bureaucracy inhibits timely response to a changing environment while a low organic structure characterized by low degree of formalization and centralization facilitates creativity and innovative performance (Burns & Stalker, 1968). Pugh, Hickson, Hinings and Turner (1968) established the dimensions of complexity, centralization, formalization and stratification in the context of an organization's ability to establish was to implement and achieve its objectives, Reimann (1973) viewed the organizational structure in form of decentralization, formalization, specialization and administrative intensity and finally Robbins (1994), considered the dimensions of complexity, centralization and formalization as the basic structures of organizational structure (as cited in Erol & Ordu, 2018).

Even though the organizational structure presents a multi-dimensional perspective, Follet (2010) notes that all the researches done indicate an overlap in the dimensions identified. However, the literature reviewed reveals the key structural dimensions as; formalization, standardization and centralization. First, formalization is a core dimension of structure as discussed by the Aston Group (Pugh *et al.*, 1963). It refers to the existence of documented procedures for bureaucratic control reducing the amount of communication required (Daft 1995). This structure standardizes operations in the organizations. Secondly, standardization involves employees working according to standardized procedure where behaviors are routinized with high predictability levels. Work is done uniformly (Daft 1995). In the formalized and standardized structures, employees are accountable to any actions taken. Thirdly, centralization is the concentration of authority at the top level of the organization that focuses on the hierarchy of authority while decentralization is the extent to which decision making is dispersed in the firm with greater autonomy and responsibility resulting in improved employee participation and information flow (Hage & Aiken, 1967). In addition, Lawrence and Lorsch, (1967) through the contingency school of thought observed that the level of uncertainty in an environment impacts the development of internal elements in organizations.

Organizational structure is seen as an organizational resource or capability that enhances the organization's capacity to innovate (Andrews, 2010). Thus, it may be considered as a contingent factor that conditions the manner in which the deployed strategic innovation brings about desired forms of capacities and subsequent firm performance. Further still, Felin and Powell, (2016) note that an organizational design is a dynamic capability that managers can harness to sense, shape and seize opportunities in the complex business environment. The division, delegation and coordination of work, affects the cooperation and internal communication, influencing access and flow of knowledge and exchange of ideas, may hinder experimentation and acquisition of new knowledge that continuously favor innovation. Although from the discussion, organizational structure is key to each firm, in order to attain the organizational goals and objectives, the structure as a capability must be reconfigured to facilitate this endeavor through employee commitment.

The turbulent and volatile external environment pose threats to business survival. The success of many firms depend on how they respond to the changing external environment. Burns and Stalker (1961) posited that in a dynamic external environment, high formalization decreases organizational adaptability to environmental changes and increases the risk of the firm's failure. On the other hand, adapting an organic organization structure, flexibility and creativity is emphasized leading to improved firm performance (Burns & Stalker 1961).

2.4 Firm performance

Strategic innovation is one of the innovation strategies that has assisted firms improve their overall performance (Wang & Ahmed, 2004). This type of strategy is crucial in enhancing performance, market advantage, sales growth and profitability (Sandvik *et al*, 2014). Strategic innovation is considered as a strategic choice that maximizes resource productivity in a firm (Nandakumar, Ghobadian & Reagan, 2011). As a result this influences resource efficiency, networking, entrepreneurial and R&D. Viewed in this manner, application of strategic innovation fulfills an important aim of the adoption of strategic options of performance. All management disciplines consider firm performance as the ultimate dependent variable of interest (Bourne, Melnyk & Bititci, 2018). All forms of market competition make firm performance critical in the current dynamic business environment. This construct therefore is a focal point in any business activity as an indicator of organizational effectiveness. In spite of the importance of organizational performance, very little theoretical research has been done to give direction on the choice and construction of performance measurement (Richard, Devinney, Yip & Johnson, 2009).

Performance measurement is critical for effective organization management. The substantial number of research studies and balanced scorecard implementations in multiple organizations demonstrate the popularity of this topic. Despite the increased need for performance measurement several companies and organizations have a challenge to effectively implement a performance management system (PMS) suitable for the organization (Couturier & Sklavounos, 2019). Organizations that continuously perform well always plan to maintain a predetermined level of performance and at the same time optimize performance by reviewing their existing performance elements. Examples of these elements include; efficiency, quality of innovation, profitability and effectiveness (Oyemomi, Liu, Neaga & Alkhuraiji, 2016). Schlegelmilch *et al*, (2003) noted that the ultimate performance derived from strategic innovation includes *customer value* derived from a proactive value creation. Strategic innovators will pursue non-customers to identify new offerings. The other is competition positioning by making competition irrelevant through superior value.

Several scholars have identified several indicators that are financial and non-financial indicators to inform on a firm's effectiveness, Return on Investment, Return on assets, profit margins, market share, increase in sales, market growth rate, (Kaplan & Norton, 2008; Selvam *et al*, 2016). In addition Carayannis and Provan, (2018) note that innovation can be measured at the input, process and output level indicators such as, percentage sales or profits of the innovation, idea generation, patents and brand reputation. This broad spectrum of measure helps clarify trends and developments over time (Saunila, 2016). It then becomes evident that such a scholarship considers indicators that are both financial and non-financial.

Burrus, Edward, Graham and Jones, (2018) note the difficulty in measuring innovation as a single dimension because of its diverse definitions and at the same time noting that innovation is not only abstract but also uncertain. A multiple array of measures have been suggested; 'patent index to capture inventiveness, a technical worker index to capture innovative capacity, and an engagement index to capture opportunities for regional collaboration outside formal channels' although this may be useful, it remains a challenge for scholars to measure intangible innovation. Given the debate and diversity of approaches to performance measurement by different scholars, Richard, Devinney, Yip and Johnson, (2009) call for research that 'examines triangulation using multiple measures, longitudinal data and alternative methodological formulations as methods of appropriately aligning research contexts with the measurement of organizational performance.' The extant literature indicates the measure of innovation performance instead of the ability to innovate over simplifying the complex nature of the sources of innovations (Neely & Hii, 1999). Most of the challenges include the need to find measurement methods that predict measures of innovation performance to provide a holistic picture through innovation performance measurement (Saunila, 2017).

Failure to address inconsistency in the definition and measurement of firm performance as a dependent variable makes it difficult to make research comparisons between different studies in similar sectors. However, Couturier and Sklavounos (2019) note the few studies on the practical use of performance instruments after implementation and lack of adequate practical tools. From the discussion on firm performance, various indicators have been noted but the performance measurement of strategic innovation remains unclear although literature highlights the important role of strategic innovation in businesses today. It remains a challenge to manage what cannot be

measured. Possible solutions to this include the need for a firm to identify all the objectives and expected outcomes with a proposed performance measure at different levels. In view of this discussion, the authors propose a much broader perspective of the construct of performance concerning the antecedent factor of strategic innovation that reflect performance measures of both financial and non-financial that considers, market share and competitiveness.

2.5 Review of relevant theories

Relevant theories have been considered to help build a case for a theoretical framework on strategic innovation in a firm context. This paper has explored these theories whose basic postulates are discussed and each linked to an aspect of the emerging phenomenon from the deployment of strategic innovation. The theories identified include: The Schumpeterian theory of innovation, Game theory, Resource based view of the firm, the dynamic capability theory, the contingency theory and the Balanced Scorecard.

2.5.1 The Schumpeterian theory of innovation

The Schumpeterian Innovation theory was developed by Schumpeter (1934). The theory forms the foundational attributes that anchor the arguments and understanding of strategic innovation. The theory posits that the business cycles are as a result of innovation that leads to prosperity and that entrepreneurship is key in an uncertain business environment where the entrepreneur must be astute in combining the key factors of production to produce the target goods or services innovatively for survival. The theory postulates a firm's development is as a result of creative pathways that involves, new product launch, new or improved production systems, access to new markets, new supplies of the required materials and creation of a new industry. The development process may be prosperous or in a recession and to survive, entrepreneurs must be very creative and knowledgeable (Schumpeter, 1934). The entrepreneurship perspective brings into play the role of leadership in the innovation process in that a leader with an entrepreneurial mindset will identify new business models with potential for growth. Further still, the theory posits that while firms face different challenges, an economic situation like recession requires that leaders become proactive and innovative. The theory continues to argue that this can only happen through a reformation process that involves introduction of new products, use of new production methods, new markets, development of new raw materials as alternative sources and rearrangement or realignment of industries. As discussed by Schlegelmich *et al.*, (2003), strategic innovation is a way of redefining the business model, having an open-minded exploration, experimentation and creating new ways of doing things. In addition the theory argues that the organizational structure and leadership determines the firm's ability to innovate for economic growth. The theory's recognition of an organization's role in the innovation process, aligns strategic innovation within the organizational structure arguing that the organizational structure and leadership determines the firm's ability to innovate for economic growth. This alignment presents an opportunity for firms to design structures that facilitate innovativeness that determines the firm's future in a dynamic business environment. The main focus of this theory is the ability to define strategic innovation, type of leader that creates a strategic innovation and the context within which this type of innovation thrives. The theory makes a way for a choice strategy based on innovation. The authors propose that the arguments of this theory are suitable to underpin the construct of strategic innovation.

2.5.2 The Game theory

The proponents of the game theory are Neumann and Morgenstern (1944). The theory is the mathematically operationalized theory of strategic interactions that postulates that social and economic issues or concerns are like games of possible strategies illustrated by mathematical models. The theory aims to model situations where decision makers make specifications that may have mutual, conflicting or have certain consequences (Geckil & Anderson, 2010). The theory posits that a firm makes a decision that affects the decisions of other firms. A specific game is clear on the required procedures that include, governing rules, interactions and possible strategies, preferences of play offs, information on the game and equilibrium (Bicchieri & Sillari, 2005). The Game theorists refer to these decisions as 'strategies' that are calculated as per the decision maker's preference and these decisions affect other firms, in this case the competitors in order to maximize profits, improve market share and remain sustainable (Ozkan-Canbolat, Beraha & Bas, 2016).

The postulates of this theory explain the nature of strategic innovation as a game changer where any competitive challenges or pressures require a firm to create new avenues or different games that are competitive and strategic innovation is about re-conceptualization of markets and industries to create a better value proposition (Markides, 1998; Ozkan-Canbolat *et al*, 2016). It also explains the procedures and strategies that form a basis for the value architecture and proposition as components of strategic innovation to maximize profits.

2.5.3 Resource Based View of the firm

Penrose (1959) discovered the critical relationship among the available resources in a firm that includes the ability to produce and the associated growth rate patterns. She introduced the firm's innovative capacity on the use of resources as seen in her theory of enterprise growth. The RBV theory borrows heavily from her work. The RBV was first theorized in 1991 after Barney's work on firm resources and sustained competitive advantage (Barney, 1991).

The RBV emphasis is on the firm's distinct and specific valuable, imperfect inimitable and rare (VRIN) resources and capabilities that create a firm's competitiveness. Innovation is a driver to a firm's success against all its competitors and therefore a rare capability that is very valuable (Damanpour, 1991). Firms encourage innovativeness or capacity to innovate in order to improve firm performance. This is done through strategic practices or processes like strategic innovation. Firms are heterogeneous in terms of the strategic resources they own and control (Amit & Schoemaker, 1993). The RBV explains the performance heterogeneity among different firms (Barney & Clark, 2007) and organizational resources and capabilities determine a firm's capacity to innovate (Lee C, Lee K, & Penning, 2001). At the same time lack of financial support limits a firm's capacity to innovate. Innovation is from the inside of a firm and it builds on a firm's available resources and capabilities to support innovative activities.

The postulates of RBV suggest that a firm's resources determine the firm's competitive advantage in a given market, thus impacting on its financial performance. While firms present different resources and capabilities, if configured well, strategic innovation and innovative capacity can create sustained competitive advantage.

The authors note that the RBV is relevant to the construct of strategic innovation because when strategic innovation is deployed as a strategic choice, the firm regards this as resource that is Valuable, Rare, Imitable and Non substitutable (VRIN) for firm performance. Secondly RBV is critical to strategic management as a discipline and complements the Schumpeter's innovation theory that calls for a creative combination of factors of production for prosperity and economic growth.

2.5.4 Dynamic Capability theory

The dynamic capabilities theory was developed by Teece, Pisano and Shuen (1997) as an extension of the RBV. The theory explains '*the firm's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments*' (Teece *et al*, 1997). The theory posits the importance of a company's capacity to recognize opportunities in the marketplace, seize them and creatively adapt in the dynamic environment. DC is a game changer in the field of strategy and management, especially in firm performance. High-level routines, or zero-order capabilities, are considered the managerial and organizational processes that reflect patterns of current practice and learning (Teece & Pisano, 1994).

Strategic innovation capacity is a critical competence in an organization that allows it to reconfigure the business model in order to address any issues arising from the rapidly changing environment. At the same time, the ability to innovate determines how the firm reconfigures both the internal and external resources to create value for survival in a dynamic environment. The organizational design is also a dynamic capability that managers can harness to sense, shape and seize opportunities in the environment. The authors therefore consider this theory suitable to underpin the construct of strategic innovation and innovative capacity as key competences in positioning a firm in a complex business environment.

2.5.5 The Contingency theory

The contingency theory was developed by Fielder (1964). This behavioral theory contends that no best way exists on organizing. An optimal organization is always contingent to both internal and external constraints. To complement the RBV where organizational structure is seen as a capability, Fielder argues that the structural contingency is a major framework used to understand the shape of an organization. No universal perspective exists to manage an organization. The theory postulates that an organization's effectiveness is influenced by an outcome of a fit between its structure and the contingencies that reflect the position of the organization (Burns & Stalker, 1961). The major contingencies are environment (Burns & Stalker, 1961), size of the firm (Child, 1975) and strategy of the firm (Chandler, 1962). Pennings (1992) asserts that the environmental stability influences the mechanistic structure that fits a stable environment that is applicable to routine operations where formalization and standardization procedures work better. The organic structure fits an unstable environment that is applicable to a highly participatory approach that is decentralized with less job specialization that enhances innovation and knowledge sharing. The size contingency influences the bureaucratic structure that leads decision making by rules that is dictated by the number of employees. On the other hand, the strategy contingency influences the divisional structure. Chandler (1962) argues that the functional strategy is appropriate for undiversified strategy where efficiency is by specialization and diversified strategy leads to coordination of activities for efficiency. According to the contingency theory, organizations' structures are shaped by the alignment to these contingencies.

The postulates of this theory demonstrate the relevance of organizational structure and its importance to firm performance. An organization's effectiveness is influenced by an outcome of a fit between its structure and the contingencies that reflect the position of the organization. Some key dimensions drawn from the theory influence the level of innovativeness in a firm and effectiveness of the operations that determine the level of performance. People will influence the design of the organizational structure given the complex environment due to uncertainty. Strategic innovation is a process within an organizational structure that is aligned in a turbulent environment with a view to have a business model that guarantees survival. The authors are of the opinion that this theory underpins the construct of organizational structure.

2.5.6 The Balanced Scorecard

The Balanced Scorecard was developed by Kaplan and Norton (1992) The BSC was reviewed as a powerful strategy and performance tool for organizations. The BSC is premised on the firm's need for both tangible and intangible assets to gain sustainable competitive advantage. The model has four perspectives that are interrelated and therefore determine the firm's progress in creation of value to the customer. The financial perspective provides reliable insights into the operations management and sustainability of the choice strategy. The associated indicators are profitability of the firm, sales, Return on investment, return on assets, cash flow and revenue (Ouma & Kilika, 2018). The customer perspective defines the quality, price and service or product. This perspective considers a firm's attractiveness to targeted customers. Kaplan and Norton, (1992) advice is that firms concentrate on a business model that focuses on high customer satisfaction. An example of indicators include; customer retention, market segment, client acquisition, client satisfaction, and profitability. The internal business processes perspective examines the processes that add value in the organization processes, activities and decisions and finally the learning and growth perspective that measures the organizations capacity to learn and innovate.

The postulates of this framework are applicable to firm performance as an outcome of both tangible and intangible assets as described through the four perspectives of finance, customer satisfaction, internal business processes, learning and growth. The BSC framework not only provides the basis upon which firm performance measurement metrics are built but also assists in strategic planning and communication of set goals (Iranzadeh, Nojehdeh & Emami, 2017). Since the construct of strategic innovation is about redefining the business model, this framework provides a clear guideline through the four perspectives that support choice of the strategy, target customers, business processes and finally learning and growth that is critical to measure an organization's capacity and ability to innovate. In this regard, the authors consider the BSC as a framework with a broad scope in the measurement of firm performance.

2.6 The Case for a Theoretical Model

In an effort to build a case for strategic innovation in the firm context, the literature so far reviewed has raised important issues that set the stage for the evolution of a phenomenon that may form a basis for a new theoretical model. We regard consideration of the emerging issues to be important in presenting and justifying a case for the needed model that advances knowledge in the discipline of strategic management. Advancement of knowledge in a scholarly and acceptable scientific manner requires a sound basis upon which that knowledge is underpinned. In modeling a phenomenon, the theorizing requires identification of the constructs, with clear roles that each is expected to play according to the perspective by (Nachmias F. & Nachmias D., 2004). Resulting from the above understanding, we identify the possibility of a phenomenon arising from the nature of strategic innovation when adopted in an organization as a strategic option. In this context, the emerging phenomenon arises from two aspects: the potential brought into an organization by the construct of strategic innovation and the context in which the strategic option is optimized.

In the first instance, the reviewed literature has been able to demonstrate evidence of a crystallized set of knowledge on the construct of strategic innovation. The literature has been able to bring out a clear understanding of the construct in a way that its nature and characteristics are understandable. This understanding is depicted through the various definitions, dimensions and drivers of strategic innovation in organizations such that a clear set of indicators are discernible. From the literature, strategic innovation can be operationalized through three components: value creation, value proposition and value capture. Value creation is operationalized using indicators of new capabilities, new technology and equipment, new process and structure. On the other hand Value proposition is operationalized using new offerings, new customer segments, new channels and new customer relationships. Finally, value capture is operationalized using revenue model and new price structure (Lehmann-Ortega & Schoetti, 2005; Teece, 2010; Clauss 2016; Sniukas, Lee & Morasky 2016).

In this regard, strategic innovation ushers into the systems of an organization innovative capacity which when interpreted from the resource based perspective is a form of capability/competence that becomes a source of sustaining competitive advantage. The competitive advantage is manifest when a firm is able to continually post satisfactory performance through various dimensions, namely financial that include, return on investment, return on assets, profit margins, increase in sales (Kaplan & Norton, 2008; Selvam *et al*, 2016). Some of the non-financial include, increased market share, market growth rate, idea generation (Carayannis & Provan, 2018), customer value, competition positioning (Schlegemilch *et al*, 2003), inventiveness, innovative capacity, (Burrus *et al*, 2018) and market advantage (Sandvik *et al*, 2014). In terms of the context, the adopted strategic option of strategic innovation is applied in the context of two factors: the prevailing climate in the firm as conditioned by the firm's infrastructure and the external environmental conditions that offer the opportunities for a firm to respond through adoption of the strategic option. In view of these components that emerge to define a phenomenon, the understanding of the construct earlier established further sets the stage for the description of the emerging phenomenon in a way that scholarship in strategic management can rely on to practically assess the behavior of the phenomenon as an aspect of firm strategic behavior.

We find support for the above logic from not only the theoretical and conceptual literatures but also from scattered pieces of empirical work. Evidence to the above possibility is found in a number of empirical studies reviewed. The authors noted the possible relationships between strategic innovation and other concepts with the use of various variables that have an implication on the direction of future research. Most of the empirical work investigated the influence of strategic innovation and firm performance. The examples include the following; Muchemi and Moronge, (2012) and McKenzie, (2014) investigated the impact of strategic innovation in the financial sectors in Kenya and South Africa respectively establishing a positive relationship between strategic innovation and performance. Kariuki, (2014) exploring strategic innovation in the telecommunication industry in Kenya established that strategic innovation has a positive effect on organization's performance. Pilisi, Namusonge and Ng'eno, (2016) in their pursuit to understand the effect of strategic innovation capability in the vendor managed retail supermarkets in Kenya noted that strategic innovation as a capability significantly affects performance. Ildiko-Csilla, (2018) explored strategic innovation management in global companies and established an innovation management model matched to the firm's corporate strategy leads to long term performance.

Another stream was on strategic innovation as a foundation for a business model where Faghieh, Dastourian, Sajadi, Henten, and Foroudi, (2018) analyzed a framework for business model with strategic innovation in the ICT sector in Iran establishing that a well designed business model is a reflection of strategic innovation in the business affecting performance. We observed organizational structure linked to innovation performance and other variable. Muturi (2015) investigated organizational structure and internal processes in the manufacturing sector in Kenya and established that the organizational structure has an influence on a firm's internal processes affecting performance. Main-Idarraga and Cuarata (2016) explored the influence of organizational structure and innovation in Columbian firms revealing that the strategic co-alignment of differentiation, formalization and decentralization influences innovation. Dekoulou and Trevillas, (2017) explored organizational structure, innovation performance and customer relationship value in the Greek advertising and media industry revealing a positive relationship between organizational structure and firm performance. Lastly, others like Rhee *et al*, (2010) linked innovativeness to performance. In their exploration on drivers of innovativeness and performance of SMEs in South Korea established that a firm's innovativeness requires an entrepreneurial orientation, market orientation and strategic thinking in order to improve performance in firms while Iplik et al, (2014) investigated strategic innovation in the hotel industry in Turkey found the need to continuously improve their innovative capacity. Oliva *et al*, (2018) further investigated the innovation process in firms in Brazil noting the importance of innovation to a firm's competitiveness. Exposito and Sanchez-Llopis (2018) analyzed innovation and business performance for Spanish SMEs and noted that the strength of innovation performance is dependent on the type of innovation strategy leading to performance.

In reference to the phenomenon that is emerging, we point at the need for documentation of the phenomenon in terms of theorizing so as to offer an opportunity for expressing the crystallized sense of understanding in the form of a theoretical model. In advancing knowledge in a given field, scholars have pointed at the critical role that theory plays (Lee & Kerlinger, 2000). Scientific research has often seen scholars split into two streams based on the role of induction and deduction. The stream of scholars leaning towards induction is of the view that phenomenon first needs to be observed and thereafter conclusions made and thus propositions are logically arrived at as a result of the observations. On the other hand, the stream leaning towards deduction suggests that we arrive at conclusions as a result of interpretation of the meaning contained in data. Arising from the two are two competing strategies on the place of theory in research: theory before research strategy or research after theory strategy. In our case, we are guided by the theory before research whereby researchers start with a theoretical framework, formulate hypotheses, and logically deducing from the results of the study in a hypothetico-deductive method (Sekaran, 2003).

Having justified the need for a theoretical model based on the above three points, we conclude the justification by raising the need for testing developed models in empirical work. As earlier argued by the stream of scientists subscribing to the strategy of theory before research, we base our argument on the need to measure the behavior of a phenomenon practically in a suitable context after which tested hypotheses can be confirmed or disconfirmed and feed into the originally developed theoretical model. In scholarship, an opportunity to test a model empirically would be considered an opportunity for advancing knowledge in that abstract propositions advanced at the abstract level find an opportunity for validation at the empirical level (Wacker, 1998). In view of the background that has faced the evolution of the construct of strategic innovation and its subsequent manner of adoption and application in organizations, proposing a new model offers this opportunity for validating the crystallized understanding resulting in the phenomenon depicted in the proposed model. Thus we propose a new model as summarized in figure 1 page 15.

3. The Proposed Theoretical Model

In view of the above discussion and an attempt to integrate the construct of strategic innovation in the strategic management literature, the authors propose a new theoretical model to inform this debate. The proposed model is based on the pillars of strategic innovation, innovative capacity and firm context. In theory building, the scholars endeavor to identify these constructs that build the emerging phenomenon, their respective roles in the phenomenon and the likely impact anticipated. In this regard, the authors propose in a new theoretical model

linking strategic innovation and firm performance in a firm context. The proposed model illustrates the relationship between the constructs and the possible indicators. *Refer to figure 1 below*

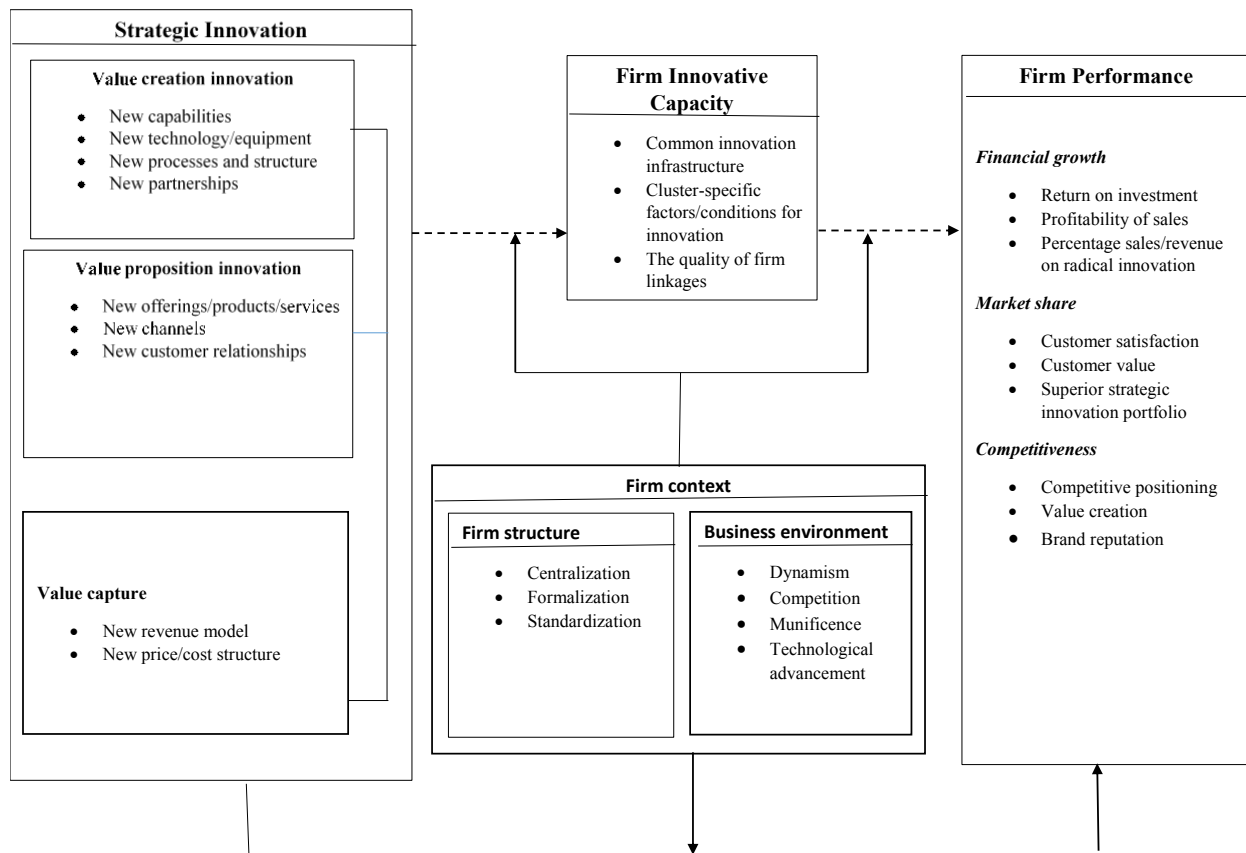


Figure 1: A theoretical model on strategic innovation in a firm context

3.1 Strategic Innovation and Firm Performance

Strategic innovation aims at maximizing value creation through the re-conceptualization or redefinition of the business model which is also referred to as the corporate strategy innovation (Schlegelmilch *et al*, 2003). The objective is to increase value creation while maintaining a sustainable competitive advantage since strategic innovation tends to expand a firm's boundaries by creating diverse options. Strategic innovation shapes the future of a firm and therefore an important factor for any firm's sustainable competitive advantage and financial performance. Strategic innovation has been operationalized through the consolidated dimensions and drivers by Schlegelmilch *et al*, (2003); Palmer and Kaplan, (2009); Lehmann-Ortega and Schoetti, (2005); Teece, (2010); Clauss (2016); Sniukas, Lee and Morasky (2016). These dimensions are based on literature and theories that include the Schumpeter theory of innovation, Resource based view (RBV) and Dynamic capability (DC). With the business environment becoming more competitive, firms are becoming even more aggressive in the identification of competitive strategies to improve performance and a continued growth (Kanyuga, 2019). Firm performance is the ultimate dependent variable of interest in any firm (Bourne *et al*, 2018). However, given that performance is a multi-dimensional construct, the extant literature presents diverse dimensions that are both financial and non-financial. The financial indicators include, Return on Investment from the innovation, percentage of sales from the radical innovation, R&D relative to sales, percentage profit of the total while on the other hand the non-financial indicators, new business model, project management approach employed, employee training on innovation, percentage of working time for the top management on innovation, any new industry standards set (Carayannis & Provan, 2018). Other non-financial indicators include, customer satisfaction, market share, patents and brand reputation.

The justification for adoption of strategies is to impact the firm's performance. The nature of strategic innovation is such that it exerts significant impact on the systems of an organization that sustain performance (Kodama, 2017). The various dimensions of this strategy drawing from diverse streams of literature are expected to enhance the firm's levels of performance. The argument from the conceptual and empirical literature indicates that components of strategic innovation stand to influence aspects of a firm's performance in diverse sectors. One study done by Kalay and Lynn, (2014) aimed at investigating the impact of strategic innovation on firm innovation performance in Turkey. The study established that firms that have adopted strategic innovation increase profit levels, create a higher customer value and competitive positioning. Muchemi and Moronge, (2012) and McKenzie, (2014) investigated the impact of strategic innovation in the financial sectors in Kenya and South Africa respectively. The studies established that strategic innovation has a positive influence on strategic innovation capacity, creation of new markets and product innovation that explains variation in performance. Faghieh *et al*, (2018) analyzed a framework for business model with strategic innovation in the ICT sector in Iran establishing that a well designed business model is a reflection of strategic innovation in the business affecting performance. Kariuki, (2014) reviewed strategic innovation in the telecommunication industry in Kenya and established that strategic innovation has a positive effect on organization's performance. Ildiko-Csilla, (2018) explored strategic innovation management in global companies and established that a good understanding of innovative culture with clear measurement based on an innovation management model matched to the firm's corporate strategy leads to long term performance. In view of the extant theoretical and empirical evidence, it is anticipated that the diverse dimensions of strategic innovation will have a direct contribution to the firm's level of performance. Thus, we propose that;

Proposition 1: The deployment of a firm's strategic innovation has potential to positively influence the diverse dimensions of the firm's performance.

3.2 The Role of Innovative Capacity

Koc (2007) argues that Innovative capacity is the firm's capacity to innovate by developing new processes, development of new products, or generation of new ideas. Innovativeness provides flexibility to a firm to engage in different options that lead to survival in the long term (Banbury & Mitchell, 1995). From the conceptual review, the firm's innovative capacity can be operationalized by the following indicators; common innovation infrastructure, cluster-specific innovation environment and quality of firm linkages (Gans & Stern, 2003). These indicators are based on literature, the RBV and DC theories that take cognizance of innovative capacity as a capability in the firm that determines how the firm continuously positions itself in the dynamic and unpredictable business environment. The ability to innovate determines how the firm reconfigures both the internal and external resources to create value for survival in a dynamic environment (Teece, 2007; Grant, 2010). Anderson, Potocnik and Zhou (2014) note that creativity and innovation work together to influence a firm's competitiveness and long term survival and as a result, firms with creative teams tend to register improved performance.

Evidence from empirical literature reveals that the firm's innovative capacity determines the extent to which a firm creates its strategic innovation forcing firms to strategically redefine their business, to create new ways of competing in order to offer new value for consumers and other stakeholders. For these firms to be successful they have to discover and exploit new strategic positions that emerge from time to time as the industry evolves. In the study done by Rhee *et al*, (2010) in their exploration on drivers of innovativeness and performance of SMEs in south Korea, it was established that a firm's innovativeness requires an entrepreneurial orientation, market orientation and strategic thinking in order to improve performance in firms while Iplik *et al*, (2014) investigating strategic innovation in the hotel industry in Turkey found that firms need to continuously improve their innovative capacity. Oliva *et al*, (2018) further investigated the innovation process in firms in Brazil and established that innovation is critical to a firm's competitiveness and subsequent economic development in the domestic context. Exposito and Sanchez-Llopis (2018) analyzed innovation and business performance for Spanish SMEs and established that the strength of innovation performance is dependent on the type of innovation strategy and the performance dimension. The study further recommended the use of a multi-dimensional approach to innovativeness. With this understanding, the authors propose that;

Proposition 2a: A firm's innovative capacity derived from the deployment of strategic innovation mediates the relationship between the deployed strategic innovation and the emerging firm performance

Proposition 2b: Even though the strategic innovation deployed in a firm influences its performance, the firm's innovative capacity determines the strength of this relationship.

3.3 The Role of Strategic Firm Context

The literature reviewed noted that strategic innovation adopted by a firm depends on both the firm structure and business environment. Further still, its creation is triggered by both internal and external firm context (Bucherer *et al*, 2012). Key drivers of firms to innovate or redefine their business models include globalization and technological advancements. This advancement enables a firm to introduce discoveries in the market faster than their competition (Teece 2010). Other factors include competition and changing customer needs and changing regulation (De Reuver, Bouwman, & MacInnes, 2009). As a result of these factors, the dynamism in the environment determines the implementation success of a firm's strategy. Chandler (1962)'s work concluded that structure follows strategy. From the extant literature, the firm structure is actually influenced by the firm's corporate strategy. To implement the strategy successfully, the structure must be aligned accordingly because organizational structure is an endogenous factor that influences innovation (Main-Idarraga & Cuaratas 2016). From the conceptual review several dimensions exist but this paper proposed the dimensions by Burns and Stalker, (1968) to operationalize the organizational structure construct. The indicators consider the continuum of mechanistic and organic levels of structure that include formalization, standardization and centralization. High organic levels of organizational structure enhance innovation in firms. Extant literature on decentralization of information flow, communication and decision making indicates that organizational structures influence employee's level of creativity, the firm's optimization of efficiency and performance in organizations (Bolton & Dewatripont 1994; Robbins, 1996). Decision making autonomy allows functional managers to establish linkages within the firm to foster creativity and distribution of resources (Gerwin & Moffat, 1997). Andrews (2010) asserts that organizational structure as a key capability contributes to the organization's capacity to innovate. And while the ability to redefine the business model is integral to dynamic capabilities, the organization's design influences the strength of its dynamic capabilities (Leih, Lindenn & Teece, 2015). The evidence from empirical literature reviewed indicated an influence of the organizational structure on the relationship between strategic innovation and performance. Muturi (2015) investigated organizational structure and internal processes in the manufacturing sector in Kenya and established that the organizational structure has an influence on a firm's internal processes affecting performance. Main-Idarraga and Cuarata (2016) explored the influence of organizational structure and innovation in Columbian firms revealing that individual differentiation has no significant effect on innovation but rather the strategic co-alignment of differentiation, formalization and decentralization influences innovation. Dekoulou and Trevillas, (2017) explored organizational structure, innovation performance and customer relationship value in the Greek advertising and media industry revealing a positive relationship between organizational structure and firm performance. Thus the paper proposes that;

Proposition 3: The relationship between deployed strategic innovation, firm's innovative capacity and emerging firm performance is moderated by the firm's organizational structure.

4. Recommendations, conclusion, limitations and future research

The objective of this paper was to review existing conceptual, theoretical and empirical literature to establish an understanding of the construct of strategic innovation in a firm context, effect of its deployment in firms and then propose an appropriate theoretical framework to model the relationships between strategic innovation and the emergent phenomena of structure, innovative capacity and emerging firm performance.

Strategic innovation, seen as a strategic option, was found to be of great importance in strategic management in pursuit of a redefined corporate strategy to position a firm in a dynamic environment. In addition, the paper reveals the role played by the firm context and the business environment as key to the relationship between strategic innovation, innovative capacity and firm performance. The arguments on the relationship between these constructs are anchored on strategic innovation as a re-conceptualization of the firm's business model, the Schumpeterian theory on innovation, Game theory, RBV, DC, BSC and the Contingency theory. This then formed the basis of the proposed theoretical model where several propositions based on the conceptual and theoretical considerations have been suggested.

Although there was extant literature reviewed, the authors noted some limitations on the fact that strategic management draws from different disciplines that may not have been very comprehensive on how a firm's strategic management influences its performance and the limited literature on strategic innovation in diverse sectors. This paper therefore calls for more engagement from scholars and practitioners to strengthen knowledge on the adoption of strategic innovation in the firm context and emerging phenomenon.

Secondly, the several propositions require validation empirically through an appropriate research design taking into considerations the identified indicators. This framework can be applied in the education sector in order to make education relevant in the market place, hospitality industry in the tourism sector to make it more vibrant and the manufacturing sector for competitiveness and sustainable growth. The manufacturing sector offers an opportunity to explore the implementation of the creative green innovation concept as an example of strategic innovation that has potential for value creation. Currently the need for social and environmental sustainability is progressively influencing economic policy decisions that impact on firm performance. The paper recommends further research to consider the influence of knowledge creation on strategic innovation. In conclusion, this paper contributes to the strategic management body of knowledge through the insights discussed on the constructs considered.

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Effect of ICT on Women Entrepreneur Business Performance: Case of Malaysia

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Abstract

Women entrepreneur has gained utmost importance in the past few decades in Malaysia due to their significant contribution to the country's economic development. However, few business challenges create a constant obstruction for many women entrepreneurs such as lack of ICT knowledge, time constraint to learn ICT, lack of technological expertise, etc. The present study aims to identify the effect of ICT adoption on business performance and examine how ICT usage helped them handle operational business matters. The present study adopted the qualitative research strategy, and researchers interviewed ten (10) women entrepreneurs for this study. A semi-structured interview technique was applied, and six Malay and four Chinese entrepreneurs made the study population. The result highlights that Malay and Chinese entrepreneurs use ICT in their business operation such as warehousing system, purchasing system, HRM software and accounting system, purchase order system, production system, internal communication, and AutoCAD. The present study may support the prospective entrepreneurs in considering the ICT usage to embark on technology and innovation and provide inputs to policymakers to design a proper support system for Malaysian women entrepreneurs, particularly those new entrepreneurs who are mostly young and inexperienced.

Keywords: Business, ICT, Performance, Malaysia, Women Entrepreneurs

1. Introduction

Women constitute about nearly half of the entire world population, which means partial progress of a country is on women's shoulders (Devi, 2012; Rahman et al., 2013). In line with this, developing countries worldwide are making strategies to upgrade women status since they are sometimes considered the most neglected group of society (Siddique, 2008; Noor et al., 2020b). Among the strategies are special incentives, tax rebates, duty cuts and subsidised land and training programs for women entrepreneurs. Past research highlights that women entrepreneurship leads towards economic stability and no gender inequality; while at the same, time will boost

women's self-reliance and empower them economically and socially. Also, apart from an economic perspective, development of women entrepreneurship and women empowerment are significant in developing countries (Alam et al., 2011; Basit et al., 2020; Noor et al., 2020a) including Malaysia. Generally, an entrepreneur refers to an individual who has an idea in mind and initiates it to produce good returns. Adeel et al. (2012) defined woman entrepreneur as a woman who can play an active role by interacting and participating in economic activities. Thus, to improve their family's financial wellbeing, without any fear of risk, many women entrepreneurs utilised their personal finances as a seed capital, and unexpectedly in many instances they are unaware of the outcomes of their business involvement (Hill et al., 2008; Dvir et al., 2010), which could let them experience business failure and losing their investment.

Most budding women entrepreneurs may need strong support from their spouse, family members, or close friends during the early stage of a business venture since they lack business acumen and experience to run a business effectively. Those who come from a family who owns a business could perform more confidently in any entrepreneurship activity than those who are not. In line with this, previous studies revealed that family background and upbringing are considered essential for entrepreneurial success (Shoebridge et al., 2012). This is deemed true since exposure to any entrepreneurial activity since early age could benefit them more than those who are not. The entrepreneurs will be more persevering, more confident and understand the business environment better and faster.

By attending training programs and workshops, women entrepreneurs could gain various new knowledge and skills crucial for entrepreneurship. Comparatively, women entrepreneurs in Malaysia are more fortunate since they can seek financial and technical support from several government agencies and ministries directly involved with women entrepreneurship development, i.e. MDeC, SME Corp, MARA, AIM, etc. Among the new skills that they could gain and improve is ICT skill. With this skill, they can enhance their business competencies i.e. management and operational.

In Malaysia, women participation in business has increased year after year. Even during the present pandemic Covid-19, more women choose to involve in various business activities from their homes. The Malaysian Companies Commission (MCC, 2015) reported that women had registered 187,264 companies out of 920,624 active establishments nationwide. The year 2010- 2015 depicted a fairer gender contribution from 19.2% or 127,422 companies operated in 2010 to 20.3% or 187,264 companies in the year 2015. The data showed that womenfolk opened an average of 10,000 companies annually within five years (The New Straits Time, 2018). The numbers are higher in 2021 since entrepreneurship has a low entry barrier for women. The choices of business venture vary, from manufacturing to services. To date, many women entrepreneurs have to rely more on ICT and technology-related operation to succeed in business, particularly when they work from home through a social media platform.

Due to their dual responsibilities as an entrepreneur and as a wife and mother, their involvement in business can be classified into three segments or groups based on their businesses' status: women in 'stable' business, women in newly formalised business, and women in non-formalised business. Formalisation refers to the business's legal registration (Fatimah et al., 2013; Lai et al., 2010). Those in a formal and registered business are devoting their time and effort as a full-time businesswoman, while others do it as a part-time activity. In contrast, other groups whose businesses are not registered and related to cottage production are mostly working on the base of referrals. These differences reflect the different goal orientations that Malaysian women have in venturing into business (Basit et al., 2020; Noor et al., 2019), precisely due to household responsibilities and duties. Nowadays, many Malaysian women choose non-formalised business to help increase their family's income. They conduct their business from home to cope with the limitation of movement outside the house during the unprecedented pandemic that affects the family's and country's economy.

As a country's progress and development are associated with the success of women entrepreneurship, however, the literature lacks the studies related to qualities of successful women entrepreneur (Alam et al., 2011; Fatima, Mohammad, and Joni, 2013; Noor et al. 2020c; Ariffin et al., 2017). Among a woman entrepreneur's qualities are business competency and capability, creativity, innovativeness, ICT skill, etc. Although various studies are done on women entrepreneurship, more studies are still explicitly needed to better understand women entrepreneurs'

growth and expansion and how they acquire new knowledge and skills. Hence, the present study explores the effect of ICT usage on Malaysian women entrepreneurs' business performance. It is essential to explore ICT's role among women since it has transformed many businesses to be internationalised within the shortest period compared to conventional business practices. With ICT implementation, prospective entrepreneurs may gain benefit and systematic guidance to operate more effectively and efficiently.

2. Literature Review

Women entrepreneurs are the key to economic growth and development in a country, and increasing their income is related to family wellbeing. Hence, the role of women is utmost important to achieve the main goals of national development in various fields such as nutrition and education of women (International Finance Company (IFC), 2007; the Centre for Arab Women Training and Research (CAWTAR, 2007)), to name some of them. By 1990, nearly five million sole proprietorships in the United States owned by women. Women-owned partnership company accounted for 31 per cent of all small businesses. At present, the percentage is approaching more than 90 per cent, which shows a remarkable increase of women interest in entrepreneurship (Basit et al., 2020)

Generally, women entrepreneurs in the 21st century seem to combine entrepreneurial characteristics such as self-discipline, focus, independence, systematic thinking, empathy, and creativity. A study found that many women open their businesses after they felt their previous employment was discriminatory to women (Spinuzzi, 2016). Therefore, by opening their own businesses, it was a starting point for success in business areas where they could conduct their business the way they prefer in a positive way, such as; i) practice of noble values, ii) caring for the welfare of workers and customers, iii) being a fair leader who can guide and not control, iv) put emphasise on the concept of cooperation rather than competition, v) be receptive to change, vi) be responsive, vii) willing to learn from mistakes, and viii) spend more time with family (Alam et al., 2011). The uniqueness of women entrepreneurs is that they are the source of strength to attract and inspire more new entrepreneurship talent (Aslam et al. 2012). Based on research on women entrepreneurs conducted in the Asian countries, there is no significant difference between Western countries (Low et al., 1996; Anjum et al., 2012; Ariffin et al., 2017; Brindley, 2016) in terms of challenges. For instance, less-educated women may face financial or human capital constraints, which limit their business pursuits. The individual characteristics such as age, years of formal education, managerial skills, creativity in generating ideas, ability to deal with people, and prior experiences in the industry, are positively correlated with firm performance (Brush, 2018). These characteristics can either directly or indirectly influence their business insights and competencies, i.e. their creativity in idea generation can lead them to be exposed to various new business opportunities. Also, their managerial skills may enhance their leadership quality as an entrepreneur. Moreover, women gained knowledge through their projects in managing and controlling productive resources, skill and experience, and an increase in their ability to source relevant information and solve problems that drove them to become reliable entrepreneurs that can run their business successfully (Hin et al., 2012; Basit et al., 2020).

2.1 ICT and Business Performance

Past literature shows that most of the studies focused on one dimension of ICT, i.e. electronic commerce (Kurnia et al., 2015; Turban et al., 2008) that involves buying and selling process. Few studies show a positive effect of ICT on business performance while few shown its negativity (Zaremohzzabieh et al., 2015). ICT is on fame worldwide today that includes broadband, mobile and Internet, providing women entrepreneurs with the opportunity to do their business from anywhere and anytime. Thus, ICT is now becoming the primary business strategy (Etemad et al., 2010; Ong et al., 2015). However, ICT alone may not be sufficient in some business activities, especially in manufacturing and machine-operated activities. Hence, various technologies, i.e. AutoCAD, ERP system, purchasing system, etc., all need ICT to be effective. Whether they like or not, women entrepreneurs today must equip themselves with ICT skill to strengthen business position in the market place and to compete in the international market.

In line with this, Malaysian Government encourage entrepreneurs to adopt ICT in business; however, there is a need of proper planning and Standard Operating Procedures (SOPs) to be successful (Chen, 2013; Ong et al., 2020)

and other business systems. As (Beninger et al., 2016) stated, an adaptation of ICT open new avenues for women entrepreneurs to connect to the entire world market, supplier and customer in a more systematic manner. Without a proper system, a business may not have a standardise guideline for a routine operation and can end with losses. Earlier studies on ICT are mostly general without specifying the gender, while others focus on critical factors or ICT's determinants (Oly and Kahraman, 2005; Aboelmaged, 2014). It is also suggested that the main hurdles in adopting the ICT among women entrepreneurs is lack of training, expensive equipment, and software packages (Vossenber, 2013; Bardan 2014). These hurdles can obstruct and affect the women entrepreneurs' confidence in full usage of ICT in their business activities. Other loads are related to the infrastructure that is not up to the mark, and network failure and trafficking (Gilbert et al.,2012). The existing issues and challenges may dampen their interest to adopt ICT to the fullest.

Undoubtedly, women entrepreneurs' knowledge, experience and technological expertise play a catalytic role but lack technical skills, creating a more challenging situation (Ong et al.,2020; Beninger et al., 2016; Anjum et al.,2012). Literature highlights the lack of studies about the adaptation of ICT and business performance among women entrepreneurs in Malaysia. Hence, the present study explores the effect of ICT on women entrepreneurs' performance in Malaysia.

3. Research Objective and Question:

RO: To explore the effect of ICT on **women entrepreneur business performance in Malaysia.**

RQ: How does ICT affect **women entrepreneur business performance in Malaysia?**

4. Methodology

The study adopted the qualitative methodology. A semi-structured interview technique was used for data collection. However, for any research method as highlighted by (Hall et al., 2016), philosophical underpinnings are considered very important as it depicts the researcher stance and covers the researcher's entire schema based on data collection and analysis technique. Moreover, questions are considered the base for the phenomena under study (Clough et al., 2012). The current study follows interpretivism as it deals with people's experience (Creswell, 2012). For this study, researchers had interviewed ten (10) women entrepreneurs from the northern part of Malaysia. The interviews were conducted in English and Malay and completed in four months. Interviews were tape-recorded and later on transcribed for analysis purposes. The interview lasted about 30 minutes to 45 minutes. The semi-structured interviews were based on ICT usage on women entrepreneurs' business performance. Hence, each interview question was transcribed to traceable chunks and coded by the participants for three interview questions. The study followed Johnny Saldaña's (2018) technique for data analysis. Subsequently, NVivo Software was used for the final data analysis (Hall et al., 2016). Table 1 depicts the interview questions.

Table 1: Interview Questions

Sr.no	Interview Questions
1	Does your business operation use ICT?
2	In which area or function ICT is applied in your organisation?
3	Do you think it is important to use any ICT related or Business Intelligence (BI) in providing the right information or knowledge for your business decision?

Table 2a: Participants Personal and Business Background

Question			Participants				
Categories	No	types	E1	E2	E3	E4	E5
individual factors	1	Age Category	30-39 years	40-59 years	40-59 years	40-59 years	40-59 years
	2	Marital Status	Married	Married	Married	Married	Married
	3	Do have a child/children	Yes - 2	Yes - 6	Yes - 3	Yes How many?	Yes - 4
education	4	Education level	postgraduate	secondary	tertiary	postgraduate	postgraduate
business background	5	Are you the sole owner of this business entity?	no	yes	no	yes	yes
	6	If No, name your position in the business.	M.D	-	others	CEO	partner
	7	This Business is a:	corporation	sole proprietor	corporation	partnership	partnership
	8	Your business experience in the current and (point to that):	11-15 years	11-15 years	more than 20 years	6- 10 years	1-5 years
	9	How did you involve in this business?	start on business	based on personal innovation and initiatives		based on personal innovation and initiatives	started the business with partner/partners
	10	What is the size of your company?	medium (50-249 employees)	small (10-49 employees)	medium (50-249 employees)	small (10-49 employees)	medium (50-249 employees)
	11	Any family members working in the business?	yes	no	yes	yes	yes
	12	Please specify your relation with the persons	Sister		spouse and children	son & daughter	

Table 2a: Participants Personal and Business Background

Question			Participants				
Categories	No	types	E6	E7	E8	E9	E10
individual factors	1	Age Category	40-59 years	30 -39 years	30-39 years	20 -29 years	40 - 59 years
	2	Marital Status	Married	Married	Single	Married	Married
	3	Do have a child/children	yes 3	Yes, two	No	Yes, One	Yes, One
education	4	Education level	Tertiary level	Secondary	Tertiary level	Tertiary level	Postgraduate (MBA) (DBA)
business background	5	Are you the sole owner of this business entity?	No	No	No	No	Yes
	6	If No, name your position in the business.	General Manager	Partner and manager	Partner and manager	Shareholder and manager	
	7	This Business is a:	Corporation	Partnership	Partnership	Sole proprietor	Corporation
	8	Your business experience in the current and (point to that):	More than 20 years	11 – 15 years	6 to 10 years	6 to 10 years	11 - 15 years
	9	How did you involve in this business?	Based on personal innovation and initiatives	Started with partner	Based on personal innovation and initiatives	With the help of husband	Based on personal innovation and initiatives
	10	What is the size of your company?	Medium (50- 249)	Small	Micro (1- 9 staff)l	Medium (50- 249)	Micro (1 - 9 employees)
	11	Any family members working in the business?	Yes	No	No	Yes	No
	12	Please specify your relation with the persons	Children			husband	

Table 2a & 2b summaries the women entrepreneurs' demographic factors and business backgrounds such as age category, marital status, number of children, education, type of ownership, business experience, company size, family member in business etc.

5. Discussion

The interviews were conducted to get a holistic view of women entrepreneurs' (Malays and Chinese) business performance after adopting ICT. The coded data cross-referenced to highlight the similarities and differences of participant views. As (Crotty, 1998) explained, continuous comparison leads to fewer themes for research questions. Table 3 depicts the main themes and sub-themes generated from transcribed interviews.

Table 3: Themes generated

Interview Questions	Themes	No of Participants
Does your business operation use ICT?	Yes	10 (M-6 C-6)
	No	0
In which area or function ICT is applied in your 142tilizing142in?	Company website	10(M-6 C-4)
	Advertising	9 (M-5C-4)
	Account system.	8(M-4 C-4)
	ERP system	7(M-5 C-2)
	UBS system	6(M-3 C-3)
	Warehousing system	9(M-5 C-4)
	Training	7(M-4 C-3)
	Purchasing system	7(M-5 C-2)
	Internal Communication	9(M-6 C-3)
	AutoCad	9(M-5 C-4)
Do you think it is important to use any ICT in providing the right information or knowledge for your business decision?	Yes	7 (M-3 C-4)
	No	3 (M-3 C-0)

Note: (M= Malay C= Chinese)

6. Findings

The study's findings concerning ICT usage that most of them use ICT to develop a company website (M-6, C-4) for advertising (M-5, C-4) account system 8(M-4, C-4), ERP system (M-5, C-2), UBS system (M-3, C-3), Warehousing system(M-5, C-4), Training (M-4, C-3), Purchasing system (M-5, C-2), Internal Communication (M-6, C-3), and AutoCad (M-5, C-4). These results show that ICT usage is considered an essential tool in the business, and they only use it for specific purposes. The feedbacks of the participants below show the importance of ICT in women entrepreneurship.

"We cannot run away from ICT, whoever wants to succeed in business must use ICT, because it has no boundaries, especially from the marketing side" (E3).

"We use ICT mainly to develop production system, 142 tilizing 142 ing between departments for internal communication. The company also use AutoCad for tooling design and development" (E6).

"We use ERP system in procurement, CAD or CAM in designing machines and UBS system in accounting"(E9).

The results above highlight that all entrepreneurs use ICT in certain areas in their business operation, and Malay entrepreneurs are more inclined to adopt ICT than Chinese. Therefore, ICT can be treated as an essential tool that influences business success. There are various tools the entrepreneurs may adopt to enhance the success rate. For instance, Standard Operation Procedures (SOPs) must be closely adhered to manage and align their business operating efficiently. The finding is in line with previous research that proper use of ICT will ensure the business success (Kurnia et al., 2015; Turban et al., 2008; Chen, 2013; Ong et al.,2020; Zaremohzzabieh et al., 2015). ICT

may provide a wide range of opportunities for women entrepreneurs' business development and act as a driving force to boost their business venture internationally. Malaysian women entrepreneurs adopt ICT usage in various business tasks such as drafting letters, preparing reports, database setup, planning, budgeting, resolve the overall analysis of problems, etc. ICT also provided the channel for speedy communication with suppliers, vendors, retailers, sellers, customers and other parties. It is proposed that in order to make women more active in ICT usage, more training programmes and workshops must be provided by the government agencies and ministries for women entrepreneurs, especially to those who live in the rural areas, to make them more familiar and confident in utilising ICT. These programmes could either be free or with a certain amount of fee charges based on the type and level of training and workshop.

7. Theoretical Justification

This study is governed by the Resource-based view (RBV). RBV is a method used to achieve competitive advantage. The concepts of resource, capability and competence have been widely discussed in management literature. As compared to the larger firms, smaller firms are less competitive because they may possess less of those three factors (Barney, 1991). According to Barney (1991), the resource-based view (RBV) implies that differences in performance between businesses may be better clarified through differences in firm resources and accumulation and usage. Businesses have a propensity to grow because of wanting to reach for economies of scale (Chandler & Hanks, 1994). There may still balance to use internal and external resources (Alvarez & Busenitz, 2001). RBV focuses on the activities that can perform with business resources. Some researchers divide resources into four categories: human, financial, physical and intangible, or four factory outputs: performance, flexibility, innovativeness, and delivery plus three network outputs; namely accessibility, mobility, and learning (Kellermanns, Walter, Crook, Kemmerer, & Narayanan, 2014). The resource-based theory is focused on performance relative to competitors (Alvarez and Busenitz, 2001). Resource-based perspective needs to achieve and support the competitive advantage. In most situations, competitive advantage is beneficial to the business when the small number of firms implement a value-creating strategy. In the resource-based view, entrepreneurs in Small Medium Enterprises (SMEs) as a manager are vital to controlling the firm's performance by utilising its resources (Barney, 1991). They have to choose the suitable strategy to make the most effective use of the firm's resources and capabilities. The firm resources comprise capabilities, processes, firm attributes, knowledge, and information controlled by a firm (Barney, 1991), which leads to the firm's competitive advantage. Contrasting to Barney (1991) was Wernerfelt, who identified resources to have consisted of anything that might be thought of as a given firm's strength or weakness (Wernerfelt, 1984). Resources can be turned into tautological and circular. Resources are considered to include anything contributing to a firm's sustainable performance (Wiklund and Shepherd, 2003). The resource-based perspective can still be considered lacking maturity. Even the exact definitions of key concepts, such as resources, competences, core competencies, capabilities, and dynamic capabilities, have not been agreed upon or remain ambiguous and controversial. The resource-based view has been instrumental in improving the legitimacy of the strategic management field as perceived by scholars in other, more conventional disciplines, including mainstream economics and organisation science (Kellermanns, Walter, Crook, Kemmerer, & Narayanan, 2014).

8. Conclusion

Woman entrepreneur's contribution to the Malaysia economic is very significant and should never overlook all parties. The present study examines the effect of ICT on women entrepreneurs' business performance. This study examines and gathers detailed information on women entrepreneurs and how successful women entrepreneurs in Malaysia are by strategising ICT in business. The research findings indicated that the entrepreneurs use ICT freely as they are more comfortable with ICT usage in business and are almost similar for both ethnics, Malay and Chinese. Their experience, issues and problems are also identical. Future studies may be conducted using a quantitative approach to find the most trends of women entrepreneurs' business success by ICT usage. Since this research focuses on Malaysia's northern region, further research should explore the impact of ICT in women entrepreneurs' businesses in different areas, sizes, and types of business. Also, Indian women entrepreneurs can be included in future study.

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Barking Up the Wrong Tree: SMEs' Perception of Tax using the ZMET Method

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Abstract

Small and Medium Enterprises (SMEs) has been a backbone for Indonesian economy over the years. This study aims to explore and gain an in-depth understanding of SMEs' perceptions regarding tax imposed by the government. The study is a qualitative investigation in which nine in-depth interviews with SMEs were conducted based on the Zaltman Metaphor Elicitation Technique (ZMET). The findings reveal deep-seated perceptions in SMEs regarding to tax imposed on them. There are 24 elicited constructs which describe SMEs' mental model of tax. The constructs are framed into four deep metaphors which reflect SMEs perceptions on tax: Distrust to the Government, Misclassification, Mistreatment and Disincentive. This study will contribute to provide suggestion to the government, particularly General Directorate of tax, that in order to give "stick" to SMEs, government may try to give "carrots" in SMEs tax cases. This study contributes to the use of ZMET as a data collecting method to examine issues that tend to be "sensitive". Previously, ZMET has been used widely in marketing research, however this research could prove that other topics of research could also use this method

Keywords: ZMET Method, Tax, Small Medium Enterprise, Mental Map, Consensus Map

1. Introduction

The number of Small and Medium Enterprises (SMEs) have been substantially increased in recent years. As the number has risen, SMEs have proven to contribute significantly to the Gross Domestic Product (GDP) (Akinboade, 2015). Entrepreneurship in SMEs has created sustainable development and eradicating poverty in some developing countries (Tilley and Perish, 2011). Purwati et al., (2014) stated that SMEs also had been a bedrock for the Indonesian economy, particularly in managing the effect of economic crisis. According to the Indonesian Ministry of Cooperatives and SMEs and Statistics Central Agency (Badan Pusat Statistik/BPS), in 2018, SMEs absorb 90.12% of Indonesia's total workforce.

The data illustrates how vital is SMEs for the Indonesian economy. As a crucial sector and the foundation of the economy, the government should support and facilitate SMEs; therefore, SMEs can survive and may not

experience failure. Pleis (2014) stated that significant failures occurred in SMEs in the United States. Seventy-five percent (75%) of SMEs failed, and the ultimate factors were accounting and tax.

Apart from the US, tax has also been a problem for SMEs in developing countries (Ameyaw et al., 2016; Inasius, 2015; Akinboade, 2015; Eragbhe and Modugu, 2014; Mansor and Hanefah, 2008; Abrie and Doussy, 2006). Inasius (2015) conducted a study with 319 individual retailers in Indonesia, which showed that tax policy was a burden for small retailers. Abrie and Doussy (2006) argued that tax compliance requirements were a “stumbling block” for SMEs. Imposing tax on SMEs, however, will hamper SME’s growth. Meanwhile, Borges, et al. (2018) showed that most public entrepreneurship policies focused mainly on financial strategies such as tax policy. Like two sides of a blade, the government needs tax from SMEs to finance the country’s development. On the other hand, tax could be an obstacle to small businesses’ growth.

In Indonesia, only 0.006% of SMEs pay taxes (Ministry of SMEs, 2017). Numerous studies have shown that tax compliance among SMEs is low, tax rates are perceived to be too high. Thus tax is considered a threat and a burden for them. Moreover, SMEs face several challenges to sustain, such as limited access to financial institutions; only 25% of total SMEs which have access to financial institutions, full control of accounting and practices from the owners despite their less knowledge of accounting (Huerta, et al., 2017), and trust issues in using professional accountant services (Blackburn, et al., 2018)

Nevertheless, only a few studies are revealing the deep-seated perceptions of SMEs on taxation. Most of the previous research used a quantitative approach. This study aims to explore and gain an in-depth understanding of SMEs’ views of tax by using the ZMET (Zaltman Metaphor Elicitation Technique) method. ZMET is a technique that elicits both conscious and more importantly, unconscious thoughts by exploring the metaphoric and non-literal expression of participants. ZMET utilises neuroscience insights to dig deeper knowledge to gain a more profound understanding of participants’ beliefs, behaviours, and decisions by using pictures as media. ZMET will reveal a mental model and will result in a consensus map. A mental model can be used to shape one’s behaviour and create an approach to manage problems regarding behaviour.

This research will have theoretical, practical and methodological implications. Theoretically, this research will enrich the results of previous study on taxes and SMEs in developing countries. Practically, this research will give an idea to the government about what tax treatment is most appropriate for SMEs. Methodologically, this research contributes to the use of ZMET as a method to examine issues that tend to be "sensitive".

The rest of this paper organises as follows. The second part describes the literature review regarding tax regulation in Indonesia and theories of tax. The third section describes applied research method. The fourth section describes the results of research and discussion. The fifth section are conclusions, implications, and opportunities for future research.

2. Literature Review

2.1 Small and Medium Enterprises (SMEs) in Indonesia

Small business in Indonesia is regulated under the Indonesian Law 20/2008. The Law divided the small business into three categories: micro, small and medium, based on its asset and turnover. According to the Law, small business refers to economic activities carried by individual or entity which is not owned, controlled, directly or indirectly part of medium or large business, or a subsidiary or branch of the company. Medium business refers to economically productive activities that stand-alone, carried by an individual or business entity. Medium-sized enterprise is not a subsidiary or branches of companies, not owned, controlled, or be a part either directly or indirectly by the small business or large enterprise. The following table is business criteria based on the Law.

Table 1: Criteria Based on Act No.20/2008

	Category	Criteria	
		Asset	Turnover
1.	Micro Business	Max 50 million Rupiah	Max 300 million Rupiah
2.	Small Business	> 50 million-500 million Rupiah	> 300 million to 2.5 billion Rupiah
3.	Medium Business	> 500 million to 10 billion Rupiah	> 2.5 billion-5 billion Rupiah

2.2 Tax for Small Medium Enterprises (SMEs)

By March 2018, the tax rate for Indonesia SMEs has reduced from 1% to 0.5%. The rate is imposed to SMEs gross revenue by Government Regulation Number 46 of 2013. This regulation is the core of SME tax because, from the government side, it provides solutions for SMEs in the form of simplicity in carrying out tax obligations. In the government's point of view, the calculation based on gross revenue will facilitate SMEs in terms of easiness since SMEs do not need to provide complete bookkeeping to pay their annual tax.

2.3 Fiscal Psychology Theory

Schmolders first coined fiscal Psychology Theory in 1959. Schmolders believed that psychological analysis can help a lot in explaining economic phenomena, including tax. The theory emphasises the loss of motivation from taxpayers to pay taxes due to the absence of direct benefits from tax payments (Hasseldine and Bebbington, 1991). Meanwhile, individual resistance (negative tax compliance) results from the personal experience of each individual (Schmolders, 1959). This personal experience also depends on the environment (community). Based on the theory of fiscal psychology, although the citizen cannot directly feel the impact of the taxes paid, the government must be transparent. The government must openly show that the tax is indeed used to procure public goods, and not arbitrarily by the government (Rosdiana and Irianto, 2014). The benefits of tax in the contemporary tax definition eventually evolved, that the perceived benefits for taxpayers could be in the form of easy access to government information so that it would build social trust from the community through transparency (Rosdiana and Irianto, 2014).

2.4 Slippery Slope Framework

Based on the Slippery Slope Framework, two things underlie voluntary compliance in paying taxes, namely the power of authority and trust in it (Kirchler et al., 2008). The sense of trust in the theory is a "social trust" from the public to the government that will motivate the people to pay taxes. The interaction between the power of authority and trust in authority will affect the level of tax compliance. For example, in conditions where trust in authorities is low, and control of authorities is weak, society will tend not to pay taxes. Indonesia is one of the countries with a low Corruption Perception Index, ranked 96th out of 180 countries (Transparency International, 2018). One of the major corruption cases that occurred was carried out by Gayus Tambunan, a senior and respected tax employee. This corruption was detrimental to Indonesia and worth billions of Rupiah. In addition to Gayus, there are still many other tax officials caught in fraud. These tax corruption cases provide a terrible precedent for the image of taxation in Indonesia.

3. Methodology

In addressing the research question, a qualitative research approach is used. To explore and gain a deep understanding of SMEs' perceptions of tax, The Zaltman Metaphor Elicitation Technique (ZMET) method is used. ZMET is a technique that elicits both conscious and primarily unconscious thoughts by exploring participants' non-literal or metaphoric expressions (Danilet and Stoian, 2017). Dr Gerald Zaltman first developed ZMET from

Harvard Business School in the early 1990s. ZMET will reveal a mental model and will result in a consensus map. Ten steps must be accomplished in ZMET. The following is the steps taken in ZMET.

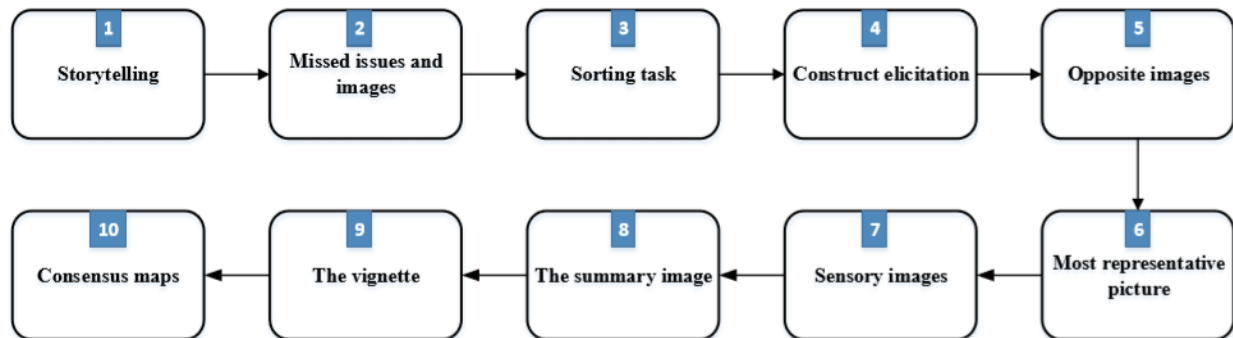


Figure 1: ZMET steps

Source: Hui Wu, Her Yan and Ming Shu (2018)

Before conducting all ten steps above, the researcher first chose the participants. The participants in this study were nine SME entrepreneurs from different business backgrounds. Before the storytelling stage, participants were asked to collect ten images that best represented their thoughts and feelings towards taxes for SMEs. The participants were asked to collect these pictures within a week. A week later the participants met with the researcher (interviewer) to begin the ZMET process.

In the first stage, Story Telling, participants were asked to explain the reasons behind the selection of the pictures. The ten images were discussed in random order. From the stories revealed, researchers began to write some important words and also explored the veiled reasons behind participants' answers. In the second stage, Missed Images, participants were asked if there was a picture they could not find and what the image meant. In the third stage, Sorting Task, the participants were asked to arrange the pictures they brought into meaningful groups. Participants then gave a name or theme to each group.






In the fourth stage, Construct Elicitation, participants were involved in an in-depth interview process with the researchers. The laddering technique is used to find constructs and relationships between the constructs. The respondents' chosen images were used as stimuli to identify the constructs. In the fifth stage, The Opposite Image, participants were asked to describe the image they would look for if they were asked to refer an image that is considered to define a converse situation with the topic currently being studied. In the sixth stage, participants were asked to select a picture that best represented their opinion on the research topic.

In the seventh step, Sensory Image, participants were asked to represent the topic under study with the senses' functions. In the eighth step, the Mental Map or Summary Image, participants were asked to create a framework illustrating the relationships between the constructs found earlier. In the ninth stage, Summary Image, participants were asked to build a collage of pictures, showing the relationships between the images and connecting them to the framework from the previous stage. In the final step, Consensus Map, the researcher constructed a consensus map from the responses of all the participants.

4. Discussion

In the first step in ZMET, Story Telling, participants were asked to describe and explain the purpose of selecting their pictures. From the story presented by the participants, the researcher recorded some key and essential words. Besides, the researchers also dug deeper with further questions about the images. Here are some examples of pictures the participant brought along with the related construct a graphic description.

Table 2: Storytelling, Construct and Illustrative Statement

Image	Construct	Illustrative Statement
	Robbery	<p>"I do not want to pay taxes, because I know that my money will be corrupted by government or government-related parties out there. Every time I turn my TV on, all I can see is corruption news. I am sick of it. They steal my money!"</p>
	Resistant	<p>"This is what I feel about tax for my business. I do not want to hear about it; I do not want to talk about it. It definitely can ruin my mood. So, if you want to bring the 'tax word' to me, you'd better go away."</p>
	Being chased	<p>"We (SMEs) are like the zebra, and the government is like the cheetah. The cheetah will chase us way faster than our ability to run."</p>
	Burdening	<p>"Tax is a burden for me. I feel it very heavy. I still earn a little from my business. The tax is not supposed to be charged to me."</p>
	Unfair	<p>"The tax imposed on MSMEs is unfair. We just learned to crawl, do not hinder us. If you want to impose a tax, put it on conglomerates. It is not fair that we are being pursued, while big business people are free. We remain small and poor, and they remain big and richer."</p>

In the second step of ZMET, Missed Image, all participants stated that there were no pictures they could not find to illustrate their perceptions of tax. That is, all images brought by participants fully represented their thoughts and feelings about taxes. In the third step of ZMET, the Sorting Task, participants were asked to group the images they considered similar in categories. In this stage, participants were required to name each group of drawings. Participant no. 1 for example, categorised the images into two categories: Current Conditions (tax implementation) and Ideal Conditions, while participant no. 2 classified the images into categories such as: Tax Burden, Tax Cruelty and Tax Rejection.

In the fourth stage, Construct Elicitation, researchers conducted a laddering process to gain an understanding of the abstraction constructed by the participants. There are several constructs identified by the researcher, namely: the originator construct, connector construct, and destination construct. In the fifth stage, The Most Representative Picture, participants choose which image they considered the most representative of their thoughts and feelings about taxes. Participant no. 9, for example, chose a picture of a government wasting public money and gave the following explanation: *"The main reason I do not want to pay tax is because of them (pointing at picture). The government, the legislative, those who are related to the power is mentally corrupted. They corrupted the income from tax, they did not realise that the tax was the sum of our (society) hard work"*

Participant no. 3 chose an image of an arrow that misses the target. Here's the explanation:

"The government targeted the wrong people. The target should be big businessmen, not us who are still pioneering the business. The biggest income tax should be from them (corporations) not from us. The government should be grateful because we are independent, not unemployed and instead open the job field for the unemployed."

In the seventh stage, Sensory Image, participants are asked to express their opinions regarding taxes through the representation of colour, sound, smell, taste, and touch. Here is participant no. 2 when asked to describe the tax *"If like a sound, like a muffler, noisy. If taste, bitter. If a smell, the garbage, not good. If touch, a thorn, sharp and painful"*. Participant no. 4 described taxes as a colour follows, *"The colour that is not clear. Not dark, not bright, but also unflattering (He then opened the laptop, opened the CorelDraw menu, and showed it to the researcher). Grey gradation colour of 50%, for example. Unclear, unpleasant views, just like taxes."*

In the eighth, ninth and tenth steps, the researcher created a mental map, interpreted the images from the participants' collages and built the consensus map. The consensus map was prepared through the codification process, determining higher-order constructs (deep metaphors) and the relationships between constructs. In constructing the consensus map, the researcher combined the results of the interview sessions, the correlation pictures from construct elicitation, mental image maps, and summary images.



Figure 2: Mental Map of Participant no. 4

Originator constructs identified in this study are (1) Corruption, (2) Robbery, (3) Theft, (4) Bad Management. Connector constructs identified are: (1) Unfair, (2) Undermined, (3) Unclear Categorisation, (4) Sharp downward, blunt upward, (5) Different Classification, (6), Being Chased, (7) Fierce, (8) Not Friendly, (9) Less Service, (10) Unpleasant treatment, (11) Disgrace, (12) Different Approach, (13) Too Many Types. Destination constructs identified are (1) Afraid, (2) Resistant, (3) Burdening, (4) Confusing, (5) Not Practical, (6) Complicated (7) Inhibitor. Here is the consensus map built from the various constructs:

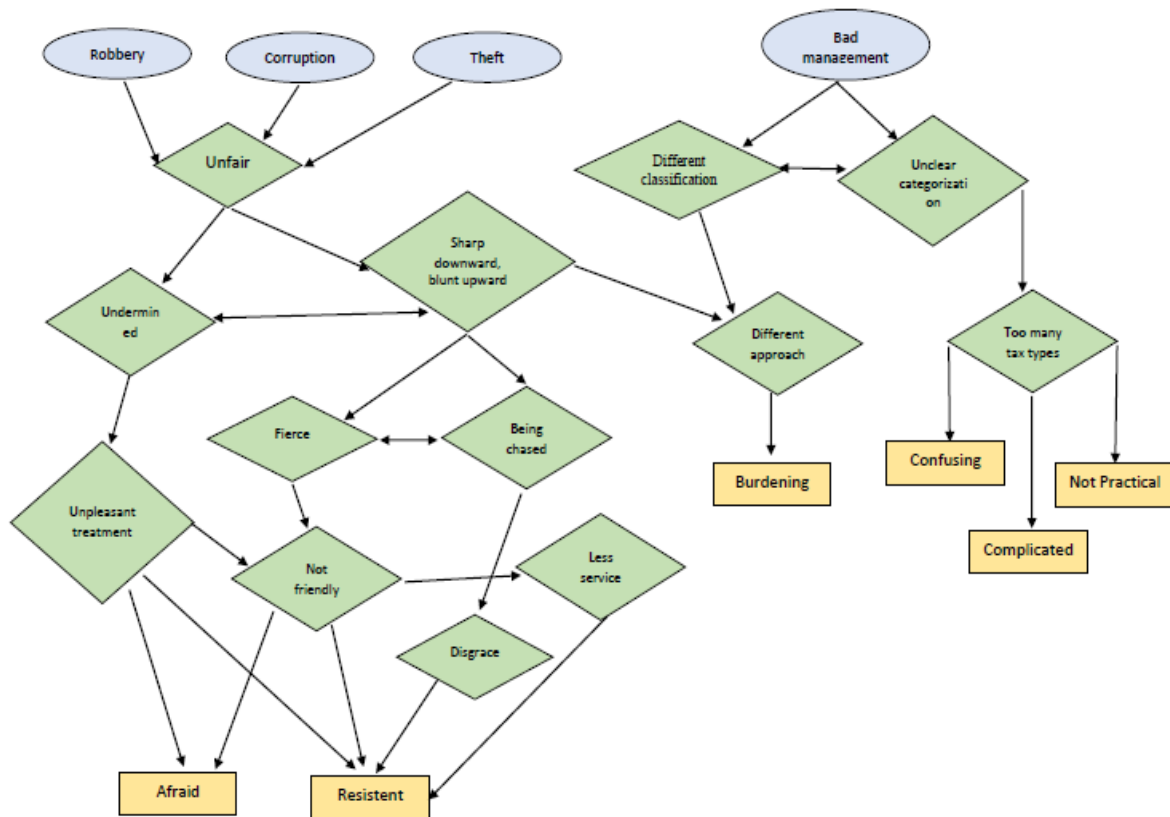


Figure 3: Consensus Map

These 24 constructs can be categorised into four more prominent constructs or deep metaphors. These four deep metaphors are (1) Distrust of the government, (2) Misclassified, (3) Mistreatment, and (4) Disincentive.

Table 3: Consensus Map Constructs and Deep Metaphors

Consensus Map Constructs	Deep Metaphors
Robbery	Distrust to the government
Corruption/corruptor	
Bad management	
Theft	
Sharp downward, blunt upward	Misclassification
Unfair	
Different Classification	
Unclear Categorisation	Mistreatment
Undermined	
Being chased	

Fierce	Mistreatment
Not friendly	
Less service	
Unpleasant treatment	
Disgrace	
Different approach	
Too many types	Disincentive
Confusing	
Not practical	
Inhibitors	
Resistant	
Burdening	
Complicated	
Afraid	

Distrust to the Government

Blackburn, et al (2018) stated that trust to external parties has been an issue for SMEs. In this finding, it including assurance to the government. It seems that acute corruption in tax official makes SMEs reluctant to pay taxes. The trust issues have been confirmed as many participants referred to one corruption case conducted by a senior tax official, Gayus Tambunan. Gayus represents SMEs imagination of tax body; rich and corrupt. Although he has been sentenced for years of imprisonment, he still can sneak out from the prison and live a luxurious life. In addition, SMEs did not believe that the government can properly manage the tax funds. This distrust of the person and system is represented by the four constructs that constitute it: robbery, corruption, theft, and bad management.

Misclassification

The next metaphor is Misclassified. Participants in this study argued that tax categorisation for the Micro, Small, Medium Enterprises (MSMEs) sector could not be equally imposed. The assets and turnover owned by micro, small, and medium enterprises are different, so, the tax obligations should be various. In micro and small companies, the owner is usually also the finance manager (Mansor and Hanefah, 2008), but medium-sized companies can hire their own tax staff. This misclassification makes micro and small entrepreneurs consider the tax "unfair" to them. The tax imposition of 1% of turnover is burdensome for micro and small enterprises, which carry out their business using the principle of "*as long as there is a cash inflow and outflow*". Unlike them, medium companies can distinguish revenue, profit, and costs to plan better for tax.

Mistreatment

Participants in this study assumed that the government made the wrong approach to them concerning tax. The method given is "stick" rather than "carrot". SMEs are being chased, undermined, and subjected to unpleasant treatment. The tax approach for SMEs, according to Eragabhe and Modugu (2014) should be "smooth". The government should act as a consultant and not as an executioner. Instead of "shooting" SMEs, the government should consider different approaches that enable both parties to sit down and talk together. With the existing approach, SMEs seem to be in "disgrace" if doing things that do not fit the tax rules. In fact, they are not intentionally avoiding tax, sometimes it is just because they do not know. They (SMEs) need more partners to consult and discuss. The Indonesian government, through Tax Directorate should consider the most appropriate way to gain trust and respect from SMEs. Arnaout and Esposito (2018) stated that communication strategy is vital for SMEs. In order to change SMEs' mindset, there must be different approach of communication.

Disincentive

SMEs perceived that there are too many types of tax which they did not understand. It confused them and thus, they considered it impractical and complicated. As a result, they become afraid when hearing about "tax" and they become resistant to tax. Huerta, et al (2017) stated that the owners of small business tend to control all the implementation of accounting and practices whether they have an accounting background. Blackburn, et al (2018) highlighted that many small businesses did not use professional accountant services, including tax services, due to trust issues. As a result, SMEs do not have qualified second opinions concerning to tax regulation. Regarding to tax rates, SMEs feel that the tariffs are overburdening them, so, instead of governments encouraging their businesses to grow, governments become inhibitors with the taxes imposed on them. These factors cause charges to be considered a disincentive for SMEs to grow.

5. Conclusion

This study aimed to explore SMEs' perceptions related to taxes. Using the ZMET method, it has been identified 24 constructs describing four deep metaphors. The four deep metaphors are Distrust of the Government, Misclassification, Mistreatment, and Disincentive. The government is perceived as the party that will use the tax money paid by SMEs corruptly. Several cases of corruption in state finances have further strengthened this perception. SMEs also perceived that there should be a different classification between the types of micro, small and medium enterprises. Therefore tax rates charged should be different. At this time, tax imposition on SMEs is considered not on target, because it focuses on small businesses which have only small-scale income. Tax treatment of SMEs is also considered to be using an inappropriate approach. Instead of acting as a consultant, the government positioned itself as executioner. It is like a proverbial dog barking up the wrong tree; the government has barked (tax collection efforts) up the wrong tree (SMEs). As a result, it will not earn the results expected by the government.

The findings of this study have several implications. Theoretically, this research will enrich the results of previous research on taxes and SMEs in developing countries. Practically, this research will contribute to providing finding that the "stick" approach used by the government is not appropriate to drive SMEs to pay taxes. The government could try to give "carrots" to SMEs. Methodologically, this research supports the use of ZMET to examine issues that tend to be "sensitive". Previously, ZMET has been used widely in marketing research, however, this research could prove that sensitive topics of research can also use this method. Future research can further explore each of the deep metaphors found in this research. Future research, for instance, can explore more on the reasons behind SMEs' distrust of the government.

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The Influence of Leadership Style on Managerial Performance of Village Governments with Motivation as Mediation

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Abstract

This study aims to understand the leadership style's influence on the village government's managerial performance with motivation as mediation. This test used the village government's managerial performance as the dependent variable, transactional leadership style and transformational leadership style as independent variables, and motivation as a mediating variable. The sample employed was the village government apparatus in Sleman Regency, Indonesia, utilizing a convenience sampling method. The data type used in this study was the primary data. Based on the distributing questionnaires' process obtained a sample of 102 respondents. Hypothesis testing in this study employed simple regression and multiple regression using SPSS v.15 software applications. The results showed that transactional leadership style, transformational leadership style, and motivation positively influenced the village government's managerial performance. Meanwhile, motivation could not mediate the relationship between leadership style and managerial performance.

Keywords: Transactional Leadership Style, Transformational Leadership Style, Motivation, Village Government's Managerial Performance

JEL: M21, M41, M48

1. Introduction

Since the enactment of Law (UU) No. 6/2014 concerning Villages, the village government has the authority in the field of Village Government administration, development implementation, community development, and community empowerment based on community initiatives, rights of origin, and customs. This authority is given from the central government to the regions, commonly referred to as decentralization. The given authority aims to

improve services' efficiency and effectiveness to reach all Indonesian society levels and organize the village properly (Nadir, 2013). With decentralization, regional government organizations' leaders are required to make more implementation decisions to be more responsible to the central government for their performance in government organizations (Nazaruddin, 2003).

The village development objectives, as stated in the Village Law, become big expectations in improving the rural communities' welfare, reducing poverty through the basic needs' provision, developing village infrastructure, developing local economic potential, and utilizing natural resources and the environment sustainably by involving all the village community components (www.kompasiana.com). However, several problems still occur in the village government. Besides, the village government services' expectations are still not optimal. The village government implementation is synonymous with various complaints from the community about the village government officials' services.

Concerning weak participation from the public and a weak transparency situation, this fact is true due to the lack of open board meetings, limited public participation in budget formation and approval, and the absence of two-way communication with local residents during the internet service era and other appropriate means of interaction. (Rashid & Jaber, 2007). Practitioners are faced with multiple barriers to performance, and in the performance measurement exercise itself, they are faced with outstanding performance reports, confusion about performance measurements, lack of performance measurement, ambiguous ownership, insufficient funding, and poor administrative practices (Gaspar & Mkasiwa, 2015).

The list of village fund cases continues to grow. From 2016 to 10 August 2017, Indonesia Corruption Watch (ICW) found 110 village funds' misappropriation cases. Of these cases involved 139 actors, 107 of whom were village heads. From ICW's monitoring, there were at least five corruption-prone points in village funds: the planning process, accountability, monitoring and evaluation, implementation, procurement of goods and services in terms of channeling and managing village funds (berdesa.com)

Local government is one of the public sector organizations that can play a major role in improving community welfare (Ulum & Sofyani, 2016). One of the lowest levels of local government is the village government. Therefore, the village government must be balanced with a good managerial performance so that the community welfare is high, and people can receive good and effective services. Each individual's performance in the institution is reflected in the institution's performance. The institution's performance is an indication of a work performance produced by the managers in these institutions in accordance with their role in the organization (Fitria et al., 2014). Managerial performance is an indicator that shows the success or failure of the previously set organizational goals and reveals how much the existing leadership's contribution to the institution. In an ideal and conducive environment, leaders tend to influence conflict management strategies and increase people to work together effectively. It becomes essential for a leader to achieve organizational goals by focusing on the rational and emotional aspects of conflicting problems while resolving disputes or conflicts that occur at any level in the organizational hierarchy (Saeed et al., 2014). According to Mahoney (2002), in Qadari et al. (2019), managerial performance in the public sector context displays the management functions' application in government organizations that can be achieved by government officials.

Managerial performance is a factor that can increase the organization's effectiveness. Situations and conditions that change every time make leaders always follow these changes. If a leader does not follow the existing changes, the decisions taken will not be in accordance with organizational goals, and organizational actions are not in accordance with organizational goals.

Leadership is a process based on social influence in which leaders strive for the voluntary participation of subordinates to achieve organizational goals (Maamari & Saheb, 2018). Leadership style is a crucial factor when associated with the organization's managerial performance process. Good and ideal leadership is needed to build loyalty and increase productivity for both managerial and parties within its scope (Ivana, 2016). The success or failure process experienced by most organizations is also determined by the leadership quality possessed by the

people in charge of leading the organization (Putri & Suparta, 2016). Thus, it is necessary to align perceptions between managerial parties and those under them to achieve perfect organizational goals.

Leadership style is closely related to performance because, often, whether someone feels comfortable or not with the job is determined by how the leader treats his subordinates to achieve a leader's goals (Nugraheni, 2015). Budiman et al. (2014) revealed that the leadership style is a method used by leaders to influence others so that the person is willing to do the leader's will to achieve goals. A leader with a leadership style that he applies makes subordinates do more to achieve organizational goals (Susanto, 2013).

Through the leader's leadership style, the leadership's performance details in carrying out their duties will be known. In carrying out their duties, knowledge, skills for innovative ideas, and the ability to filter information are needed by a leader in making the right decisions for the organization. Besides, the leadership style used by leaders to manage an organization must be able to influence and direct their subordinates so that everything done by subordinates is in accordance with the leader's wishes. Much of the literature on leadership has focused on how a leader could motivate his subordinates (Gilbert & Kelloway, 2018).

Research on leadership styles on managerial performance has previously been investigated by several researchers (Amalia et al., 2016; Ivana, 2017; Ridwan & Hamelinda, 2017; Afrizal, 2017), where there was a relationship between the influence of leadership style and managerial performance. On the other hand, research by (Nugraheni, 2015; Hakim & Asmony, 2016) suggests no relationship between leadership style and managerial performance. Looking at the previous studies, there were still inconsistencies in the relationship between leadership styles and managerial performance, investigated in this study.

2. Literature Review

2.1. Goal-Setting Theory

The goal-setting theory was proposed by Latham & Locke (1990), in which this theory explains the relationship between set-goals and work performance. This theory is based on what Aristotle called ultimate causality, which is an action caused by a goal (Locke, 1996). Goals can be defined as generic concepts that include the essential meanings of terms, such as intention, task, goal, objective, and purpose. However, reputation is different from goals in that they can be understood as the goals' result set by the individual and achieved, in most cases, through high-level commitment. Goal commitment is an essential motivational construct in goal-setting theory, which postulates that specific difficult but achievable goals lead to higher performance (Carroll et al., 2000), (Sholihin et al., 2011). If the leader has set goals for his actions in the future, these goals will influence his actions and behavior. The higher the goal, the higher the performance (Latham & Locke, 2006). Robbins & Judge (2015) explain that top-level managers must know the actions and efforts to achieve the desired goals, one of which is the leadership style applied to the organization. Because in essence, managerial performance cannot be separated from the leader's role.

2.2. Expectation Theory

The expectation theory was proposed by Vroom (1964), where this theory puts forward the principle that individuals in an organization will be motivated to do things related to organizational goals. A worker's effort level depends on the expectation that the worker believes that the effort put in will pay off (Johnson, 2010). Expectancy theory is a cognitive process theory of motivation based on the idea that people believe a relationship exists between the effort they put in at work, the performance they achieve from that effort, and the rewards they receive for their effort and performance. In other words, people will be motivated if they believe that a strong effort will result in a good performance, and good performance will produce the desired reward (Lunenburg, 2011). Someone who can influence an individual's actions in an organization is the manager. A manager, directly or indirectly, will try to provide employees with work motivation in line with the organization's goals. The expectancy theory provides a mechanism for determining motivation through certain calculation types. The

expectation theory works by looking at the value that employees assign to work results (Parijat & Bagga, 2014). Thus, employees will feel more focused and are in line (goal congruent) with organizational goals despite their personal goals. Through the leadership style applied by a manager, it is hoped that it can motivate his subordinates to try to achieve the goals set by a manager. The more workers feel that their work in a particular task will be appreciated and that the reward is valuable to them, the more effort they will put into (Johnson, 2009).

3. Hypothesis Development

3.1. The Influence of Transactional Leadership Style on Managerial Performance

The goal-setting theory was proposed by Latham & Locke (1990), in which this theory explains the relationship between set-goals and work performance. If the leader has set goals for his actions in the future, these goals will influence his actions and behavior. Robbins & Judge (2015) explicate that top-level managers must know the actions and efforts to achieve the desired goals, one of which is the leadership style applied to the organization. Because in essence, managerial performance cannot be separated from the leader's role. The transactional leadership style is a leadership style based on exchanges between leaders and subordinates, where a leader gives an award to his subordinates if the subordinate can meet his expectations. The transactional leadership style allows leaders to achieve their performance goals, complete required tasks, maintain the current organizational situation, motivate subordinates through contractual agreements, direct subordinates' behavior towards the set goals' achievement, emphasize extrinsic rewards, avoid unnecessary risks, and focus on improving organizational efficiency (McCleskey, 2014). This transactional leadership style positively affected managerial performance (Amalia et al., 2016; Ivana 2016; Katim & Wiliyawati 2016; Bawarodi et al., 2017; Rorimpandey, 2013; Vigoda, 2007; Ejere & Abasilim, 2013; Masa'deh et al., 2016; Samson & Ayodeji, 2019; Kalsoom et al., 2018). It means that the more effective a leader is in applying this transactional leadership style, the higher the resulting performance. Based on the description above, the hypothesis of the relationship between transactional leadership style and managerial performance is:

H1: The transactional leadership style positively and significantly affects the Village Government's managerial performance.

3.2. The Influence of Transactional Leadership Style on Motivation

Individuals in an organization will be motivated to do things related to organizational goals (Vroom, 1964). Someone who can influence an individual's actions in an organization is the manager. A manager, directly or indirectly, will try to provide employees with work motivation in line with the organization's goals. Through the leadership style applied by a manager, it is hoped that it can motivate his subordinates to try to achieve the goals set by a manager. The transactional leadership style is a leadership style based on exchanges between leaders and subordinates. Transactional leaders focus on the right resources' exchange (Judge & Piccol, 2004). It is where a leader gives an award to his subordinates if the subordinate can meet his expectations. Transactional leadership is described as a leader who provides subordinates explanation of responsibilities or duties and the rewards they can expect if the expertise standard is attained (Putu et al., 2019). To make transactional leadership more effective, appropriate use of contingent rewards is vital feedback to gather expectations with followers in terms of their performance (Paracha et al., 2012). Barbuto (2005) uncovered that this transactional leadership style could increase his subordinates' motivation externally. Transactional leadership style applied effectively could affect his subordinates' work motivation (Amalia et al., 2016; Tatengkeng & Andreani, 2019; Rosiana & Safitri, 2015; Puspitasari & Minarsih 2018; Nielsen et al., 2019). A leader who uses a transactional leadership style effectively can increase his subordinates' work motivation. Based on the description above, the hypothesis of the relationship between transactional leadership style and motivation is:

H2: Transactional leadership style positively and significantly affects the Village Government employees' motivation.

3.3. The Influence of Transformational Leadership Style on Managerial Performance

Latham & Locke (1990) proposed goal-setting theory in which this theory explains the relationship between set-goals and work performance. Thus, a leader can influence performance. Transformational leadership occurs when leaders and followers raise each other to higher levels of motivation and value (Naderi et al., 2019). If the leader has set goals for his actions in the future, these goals will influence his actions and behavior. In a stable setting, transactional leaders manage what they find and ignore what they discover as they progress. Nevertheless, today's competitive settings require a new leadership style to ensure organizational performance and survival, namely transformational leadership (Mahdinezhad et al., 2013). A leader's style in an organization is a description of the work steps for employees under him. Robbins & Judge (2015) elucidate that top-level managers must know the actions and efforts to achieve the desired goals, one of which is the leadership style applied to the organization. Because in essence, managerial performance cannot be separated from the leader's role. Transformational leadership style positively impacted performance (Italiani, 2014; McMurray et al., 2012; Rorimpandey, 2013; Vigoda, 2007; Masa'deh et al., 2016; Nguyen et al., 2017; Samson & Ayodeji, 2019; Ejere & Abasilim, 2013; İşcan et al., 2014; Samson & Ayodeji, 2019; Andriani et al., 2018). It denotes that the more effective a leader is in applying this transactional leadership style, the higher the resulting performance. Based on the description above, the hypothesis of the relationship between transformational leadership style and performance is:

H3: The transformational leadership style positively affects the Village Government's managerial performance.

3.4. The Influence of Transformational Leadership Style on Motivation

Based on the expectation theory suggested by Vroom (1964), this theory also puts forward the principle that individuals in an organization will be motivated to do things related to organizational goals. A manager, directly or indirectly, will try to provide employees with work motivation in line with the organization's goals. Through the leadership style applied by a manager, it is hoped that it can motivate his subordinates to try to achieve the goals set by a manager. Transformational leadership is a model used to motivate and inspire subordinates to achieve results that exceed those previously planned or set. The transformational leaders' impact on their followers is ascribed to their ability to maintain their needs, empower them, and give them a sense of mission toward broad and ethical goals beyond their own (Eyal & Roth, 2011). Findings by Ayoko et al. (2003) demonstrated that transformational leadership was more strongly associated with extra effort and subordinate satisfaction with officers' focus and effectiveness perceptions. Transformational leaders can smooth the progress of these changes by adding value to expanding the vision and by encouraging subordinates to pursue that vision. It affirms the four leadership scales: charisma, inspiration, individual consideration, and intellectual stimulation (Paracha et al., 2012). Motivation is the follower's interest in the task, and belief is the follower's sense of security or self-confidence, the extent to which the follower believes he can work independently and perform well (Thompson & Glasø, 2018). The transformational leadership style had a positive relationship with motivation (Amalia et al., 2016; Ayoko et al., 2003; Tatengkeng & Andreani, 2019; Rosiana & Safitri, 2015; Alghazo & Meshal, 2016). Based on the description above, the hypothesis of the relationship between transformational leadership style and performance is:

H4: Transformational leadership style positively affects motivation.

3.5. The Influence of Motivation on Managerial Performance

Managerial performance is managerial skills in carrying out managerial activities of planning, investigation, coordination, supervision, staff placement, negotiation, and representation (Bone, 2017). Managers who have goals and objectives to be achieved will have high motivation for themselves. Motivation can be formed because of the various desires and expectations within the personal manager (Robbins & Judge 2015). Useful information can help managers make effective decisions, which improve managerial performance (Ghasemi et al., 2016). The manager's strengths, desires, and expectations ultimately lead the manager to strive to maximize his performance (Robbins & Judge, 2015). Managers will be motivated to achieve company goals because performance appraisals

and awards for managers' achievements will be assessed on the goals' achievements that have been accomplished (Agusti et al., 2013). Thus, managers who have goals to be achieved will work better and more optimally than managers with low motivation (Widyastuti, 2013). Motivation could positively and significantly impact performance (Katim & Wiliyawati, 2016; Rismayadi, 2018; Qadari et al., 2019; Nielsen et al., 2019; Putu et al., 2019; Andriani et al., 2018). It signifies that the higher a person's motivation to work, the performance will increase. Based on the description above, the hypothesis of the relationship between motivation and performance is:

H5: Work motivation positively affects the Village Government's managerial performance.

3.6. The Influence of Transactional Leadership Style on Managerial Performance through Motivation

A leader who understands the goals will indirectly be affected by his work behavior. If the leader has set goals for his actions in the future, these goals will influence his actions and behavior. Robbins & Judge (2015) describe that top-level managers must know the actions and efforts to achieve the desired goals, one of which is the leadership style applied to the organization. Because in essence, managerial performance cannot be separated from the leader's role. Vroom (1964) disclosed that individuals in an organization would be motivated to do things related to organizational goals if they feel confident in their actions, which are expected to achieve them. Transactional leadership is described as a leader who provides subordinates explanation of responsibilities or duties and the rewards they can expect if the expertise standard is attained (Putu et al., 2019). Managers who have goals and objectives to be achieved will have high motivation for themselves. Motivation can be formed because of the various desires and expectations within the personal manager (Robbins & Judge, 2015). The manager's strengths, desires, and expectations ultimately lead the manager to strive to maximize his performance (Robbins & Judge, 2015). According to Amalia et al. (2016), a leader must listen more to his subordinates' aspirations with the aim that his subordinates feel more valued and more motivated to work better. Moreover, later, if subordinates are motivated to work well or actively, managerial performance will increase. Research conducted by Amalia et al. (2016), Soewarto et al. (2011), and Putu et al. (2019) showed that motivation mediated the relationship between leadership style and performance. Based on the description above, the hypothesis of the relationship between transactional leadership style and performance through motivation is:

H6: Motivation mediates the relationship between transactional leadership style and the Village Government's managerial performance.

3.7. The Influence of Transformational Leadership Style on Managerial Performance through Motivation

A study by Ayoko et al. (2003) illustrated that transformational leadership was more strongly related to extra effort and subordinate satisfaction with officers' focus and effectiveness perceptions. Robbins & Judge (2015) explain that top-level managers must know the actions and efforts to achieve the desired goals, one of which is the leadership style applied to the organization. Because in essence, managerial performance cannot be separated from the leader's role. Vroom (1964) exposed that individuals in an organization will be motivated to do things related to organizational goals if they feel confident in their actions, which are expected to achieve them. Managers who have goals and objectives to be achieved will have high motivation for themselves. Motivation can be formed because of the various desires and expectations within the personal manager (Robbins & Judge, 2015). The manager's strengths, desires, and expectations ultimately lead the manager to strive to maximize his performance (Robbins & Judge, 2015). As stated by Tucunan et al. (2014), a leader will be able to direct employees to get better performance if he focuses on achieving the values of beliefs, attitudes, behaviors, and subordinates' needs towards better changes. Besides, his attitude that can foster awareness and high commitment from groups of employees can increase work motivation. Therefore, managerial performance will increase. Research conducted by Amalia et al. (2016) and Soewarto et al. (2011) showed that motivation mediated the relationship between leadership style and performance. Based on the description above, the hypothesis of the relationship between transformational leadership style and performance through motivation is:

H7: Motivation mediates the relationship between transformational leadership style and village government's managerial performance.

Based on the theoretical review and hypothesis development, the variables in this study were transactional leadership style and transformational leadership style as independent variables, motivation as a mediating variable, and managerial performance as the dependent variable, as described in Figure 1.

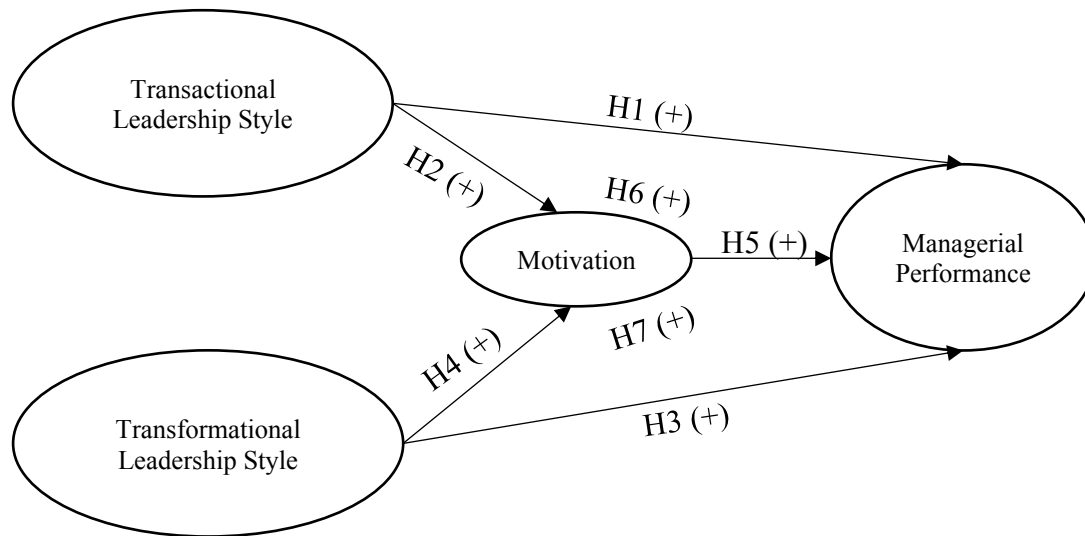


Figure 1: Research Model

4. Methodology

4.1. Data

In this study, the data used are primary data obtained directly from respondents. The data collection technique employed was a survey method by distributing questionnaires to be filled in or answered by respondents. The primary data in this study were in the form of scores on respondents’ answers to the questions in the questionnaire. The questionnaire utilized was a closed question model. The respondents chose answers from the available alternative answers.

4.2. Population and Sample

In accordance with this study’s objectives, this study’s population was village officials in the village government in Sleman Regency, Indonesia. Given the large enough population, this study employed a representative sample of the population as a whole. The sample collection technique used was convenience sampling. This study took two villages from each sub-district in Sleman district, so a total of 34 villages were obtained. Respondents for each village were the village secretary, head of government, head of development, head of finance, head of general, and head of public welfare.

4.3. Data Analysis

The data collected from distributing questionnaires were tabulated and tested using the SPSS V15.0 application. Hypothesis testing utilized path analysis. Path analysis is an extension of multiple linear regression analysis.

The regression equation in Figure 1

$MO = \alpha + \beta_1 TSK + \varepsilon_1$ Regression Equations 1

$KM = \alpha + \beta_2 TSK + \beta_3 MO + \varepsilon_2$ Regression Equations 2

The regression equation in Figure 2

$MO = \alpha + \beta_4 TRF + \varepsilon_3$ Regression Equations 3

$KM = \alpha + \beta_5 TRF + \beta_6 MO + \varepsilon_4$ Regression Equations 4

Explanation:

KM	=	Managerial Performance
TSK	=	Transactional Leadership Style
TRF	=	Transformational Leadership Style
MO	=	Motivation
β	=	Direction of Regression
ε_1	=	Residual Motivation
ε_2	=	Residual Managerial Performance
ε_3	=	Residual Motivation
ε_4	=	Residual Managerial Performance

Hypotheses 1-5 used simple linear regression, while hypotheses 6 and 7 employed path analysis as an intervening. The hypothesis can be accepted if the path analysis results show a significance level below 0.05 ($p < 0.05$), and the hypothesis will be rejected if the regression results indicate a significance above 0.05 ($p > 0.05$) (Nazaruddin & Basuki, 2019).

5. Results and Discussion

This research was conducted on 102 respondents, consisting of village government officials in Sleman Regency. In this study, the data collection technique was to use a survey method by distributing the questions' list in the form of a questionnaire. The questionnaires in this study were distributed directly to the respondents. However, not all returned questionnaires in this study could be used. The number of questionnaires that could be used was 95 questionnaires, or the response rate obtained was 93.14% of the target. The distribution of the questionnaire response rates based on the target respondents is shown in Table 1.

Table 1: Questionnaire Return Rate

Explanation	Total	Percentage
Distributed questionnaires	102	100%
Questionnaires returned	95	93,14%
Non-return questionnaire	7	6,86%
Unprocessed questionnaire	4	4,21%
Processable questionnaire	91	95,79%

Source: Results of Data Processing, 2019

Table 1 presents this study's descriptive statistics. Before testing the hypothesis, it is necessary to test the classical assumptions. The normality test results obtained by the Kolmogorov-Smirnov (K-S) significance value were $0.422 > 0.05$, $0.654 > 0.05$, $0.531 > 0.05$ and $0.980 > 0.05$, so it could be seen that the data in this study were normally distributed. The multicollinearity test showed that none of the independent variables had a tolerance value of less than 0.10 and a VIF value of more than 10. It indicated that the two multiple linear regression models were free from the multicollinearity assumption. Meanwhile, for the heteroscedasticity test, the results revealed that all independent variables had a significance above the 5% confidence level, so it could be concluded that the regression model in this study was free from heteroscedasticity.

Table 2: Descriptive Statistics Test Results

	N	Minimum	Maximal	Mean	Std. Deviation
Transactional Style	91	10,00	27,00	19,7802	3,78242
Transformational Style	91	12,00	50,00	37,2637	5,96254
Motivation	91	31,00	47,00	39,6813	3,68745
Managerial Performance	91	29,00	45,00	36,2747	3,52473

Source: SPSS v.15, 2019 output

The test results with simple and multiple regression analyses that have been carried out can be seen in Table 3. The regression analysis results for hypothesis 1 concluded that H1 was supported. This study supports several

previous studies, such as research by Amalia et al. (2016), Ivana (2016), Katim & Wiliyawati (2016), Bawarodi et al. (2017), Rorimpandey (2013), Vigoda (2007), and Masa'deh et al. (2016), which proved that the transactional leadership style affected performance. From the test results, it could be seen that the transactional leadership style had a positive and significant effect on the village government's managerial performance, which in this study was the Village Government's structural apparatus in Sleman Regency. It implied that the more effective a leader was in applying a transactional leadership style, the higher the Village Government's resulting managerial performance in Sleman Regency would increase so that services to the community would also increase.

Table 3: Summary of Hypothesis Test Results

Hypothesis	Direction	t	Coefficient	Sig.	Conclusion
TSK-KM	+	2,603	0,234	0,011	Supported
TSK-MO	+	4,330	0,417	0,000	Supported
TRF-KM	+	3,306	0,290	0,000	Supported
TRF-MO	+	4,281	0,413	0,000	Supported
MO-KM	+	2,603	0,509	0,000	Supported
TSK-M-KM	+		0,212	0,000	Rejected
TRF-M-KM	+		0,201	0,000	Rejected

The regression analysis results also concluded that H2 was supported. This research supports several previous studies, such as research by Amalia et al. (2016), Tatengkeng & Andreani (2019), and Rosiana & Safitri (2015), which verified that transactional leadership style influenced motivation. The results showed a positive and significant influence on the transactional leadership style on motivation. It indicated that the more effective a leader was in applying a transactional leadership style, the higher the village officials' motivation in completing their work at the Village Government in Sleman Regency.

Furthermore, H3 from this study was also supported. This study's results support previous research, which stated that there was a significant positive effect of transformational leadership on performance, for example, research by Italiani (2014), McMurray et al. (2012), Rorimpandey (2013), Vigoda (2007), Masa'deh et al. (2016), and Nguyen et al. (2017). It exhibited that the more effective a leader was in applying a transformational leadership style, the higher the managerial performance produced in the village government in Sleman Regency would also increase service to the community.

Moreover, H4 from this study was also supported. These results support previous research, such as research by Amalia et al. (2016), Ayoko et al. (2003), Tatengkeng & Andreani (2019), and Rosiana & Safitri (2015), which proved that transactional leadership style impacted motivation. It demonstrated that the more effective a leader was in applying a transformational leadership style, the higher the village officials' motivation in the Village Government in Sleman Regency.

The regression analysis results for hypothesis 5 found that motivation influenced managerial performance. These results support previous research, such as research by Qadari et al. (2019), Katim & Wiliyawati (2016), and Rismayadi (2018), which confirmed motivation affected managerial performance. It illustrated that to improve the Village Government's managerial performance in Sleman Regency, increasing structural officials' motivation in the village government could be done. With the increased motivation of structural officials in the village government, it is hoped that the leaders' managerial performance will further improve so that service to the community will also increase.

Besides, the regression analysis results for hypothesis 6 showed that the direct effect of transactional leadership (TSK) on managerial performance (KM) was 0.234. Meanwhile, the indirect effect of transactional leadership style through motivation (MO) on managerial performance was the multiplication of the TSK beta value against M with the M beta value for KM, namely $0.417 \times 0.509 = 0.212$. Based on the above calculation results, it was known that the direct effect value was 0.234, and the indirect effect was 0.212, which indicated that the direct

effect value was higher than the indirect effect value. These results signified that motivation could not mediate the relationship between transactional leadership styles and the village government's managerial performance.

Finally, the regression analysis results for hypothesis 7 displayed that the direct effect of transformational leadership (TRF) on managerial performance (KM) was 0.290. Meanwhile, the transformational leadership style's indirect effect through motivation (MO) on managerial performance was the multiplication of the TRF beta value against M with the M beta value for KM, namely $0.413 \times 0.487 = 0.201$. Based on the above calculation results, it was known that the direct effect value was 0.290, and the indirect effect was 0.201, meaning that the direct effect value was higher than the indirect effect value. These results denoted that motivation could not mediate the relationship between transformational leadership styles and the village government's managerial performance.

Table 4: The Magnitude of Direct and Indirect Influence on Hypothesis Testing

No.		Path Coefficient
1.	TSK→KM	0,234
2.	TSK→MO→KM	0,417x 0,509= 0,212
3.	TRF→KM	0,290
4.	TRF→MO→KM	0,413 x 0,487= 0,201

Source: Output SPSS v.15, 2019

Table 4 presents the coefficient values' comparison of direct and indirect effects of the relationship between the variables tested. From Table 4, it is shown that the indirect effect of transactional leadership on managerial performance through motivation (0.212) was smaller than the direct influence of transactional leadership on managerial performance (0.234). The same results were obtained for testing the relationship between transformational leadership style and managerial performance with motivation as a mediator. The path analysis result showed that the magnitude of the indirect effect (0.201) was smaller than the direct effect (0.290). Based on these findings, it could be seen that motivation could not mediate the relationship between transactional leadership styles and transformational leadership styles on managerial performance, indicating that the indirect effect of transactional leadership on managerial performance through motivation was smaller than the direct influence of transactional leadership styles on managerial performance. Based on this description, it could be seen that motivation could not be a mediating variable (intervening) of transactional leadership styles and transformational leadership styles on managerial performance.

6. Conclusion

This study examined the relationship between transactional leadership styles and transformational leadership styles on the village government's managerial performance through motivation as a mediator. This study was conducted on village administrations in Sleman Regency. This study's results indicated that transactional leadership styles, transformational leadership styles, and motivation had a direct positive effect on managerial performance. It showed that the more effective a leader was in applying a transactional and transformational leadership style, the higher the managerial performance and motivation generated in the Village Government in Sleman Regency, so that services to the community would also increase. Besides, increasing the structural officials' motivation in the village government could improve leaders' managerial performance in the Village Government in Sleman Regency. Other results obtained from this study demonstrated that the indirect effect of the relationship between transactional leadership and transformational leadership styles on managerial performance through motivation had a smaller coefficient value than the direct effect. Therefore, it could be said that motivation could not mediate the relationship between transactional leadership styles and transformational leadership styles on managerial performance.

Departing from these findings, village heads in the Village Government, especially in Sleman Regency, should make effective application of transactional leadership styles and transformational leadership styles so that the village government's managerial performance increases; thereby, services to the community will be more effective and efficient.

6.1. Limitation and Recommendation for Further Research

This research has limitations, which was only conducted in the Sleman District Government. Studies on village governments in other areas are essential for further research to increase this study findings' validity. Furthermore, further research also needs to consider using other approaches to find more substantial empirical evidence.

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Transformational Leadership and Organizational Success: Evidence from Tertiary Institutions

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Abstract

This study examined the extent to which transformational leadership dimensions affect organizational success in tertiary institutions in Anambra State Southeast Nigeria. A cross-sectional research design was employed for this study. A total of 325 staff members from each university were surveyed in this study and the total number of employees was increased to (N) 650. However, 154 usable copies of the questionnaires were finally collected and are used in the analysis of data. Data were collected using a structured questionnaire. The questionnaire was tested for reliability by using Cronbach alpha to determine the internal consistency of the items. The study used expert judgment method to determine content validity. Pearson's product moment correlation techniques were used to analyze the data at 5% level of significance. The results showed that transformational leadership dimensions and organizational success in the selected tertiary institutions had a strong positive and significant correlation. The study concluded that leadership is a critical success factor that can bring about changes in employees and universities as a whole. The study recommended that management at all levels in the universities should provide proper self-development plan and build teamwork to ensure continued optimism and enthusiasms within their employees.

Keywords: Transformational Leadership, Idealized Influence, Inspirational Motivation, Intellectual Stimulation, Individualized Consideration, Organizational Success

1. INTRODUCTION

Tertiary institutions around the world are facing a decline in public funding, while asking them to invest in organizational transformation processes to remain relevant in an increasingly competitive sector (Bendermacher, Egbrink, Wolfhagen & Dolmans, 2016). Similarly, tertiary institutions in Nigeria have undergone a series of transformations to increase access, quality and encourage internal and external efficiency of the system. Internal

efficiency in terms of graduating in record time with very little or no dropout and external efficiency regarding producing what the market would absorb at the end of studies to minimize or eliminate unemployment (Okoli, 2018; Ajadi, 2010). These transformational challenges have great consequences for the university governance and leadership behavior of universities (Seale & Cross, 2016), as they are the main force of these processes of change and transformation (Bendermacher et al., 2016). Exceptional leadership is needed to meet these transformational challenges.

Naylor (1999) sees leadership as the process of influencing employees towards achieving organizational goals and organizational excellence. Exceptional leaders have strategic intentions for their institutions. Beare, Caldwell & Millikan (1997) claim that exceptional leaders have an image of their favorite future, which is shared with all members of the institution and which models learning and teaching programs, as well as policies, priorities, plans, and procedures that permeate the daily life of the institution. Peretomode (1991) argues that through the words, and examples, leaders of tertiary institutions inspire the entire system by effectively influencing the behaviors, thoughts, and emotions of those working there and ensuring their vision by creating strategic alignment across the system. Therefore, the key to predict the future of tertiary institutions is through a transformational leadership style.

Marshall (2011) defines transformational leadership as a leadership style in which the leader identifies the necessary change, creates a vision to guide the change, and executes the change. Transformation leaders are those who stimulate and inspire followers to achieve extraordinary results and develop their leadership capacity. Transformational leadership is a style of leadership that involves change (Money, 2017). Change simply may not happen in universities, but it happens in people, so to lead change, leaders need to know how to lead people. Through their visionary power and personality, transformational leaders can encourage followers to change expectations, perceptions, and motivations to work toward common goals. Krishnan (2005) argues that the key premise of transformational leadership theory is the leader's ability to motivate followers to achieve more than followers intended to achieve. However, it is doubtful whether Nigerian tertiary institutions could internalize the revolutionary leadership style at universities. Although empirical research on transformational leadership and organizational performance is growing, there is relatively little research on transformational leadership in services, particularly in tertiary institutions, although the educational sector has been the backbone of every country. Therefore, this research examines how transformational leadership variables affect organizational success in tertiary institutions.

This study therefore investigates the effect of transformational leadership on organizational success in tertiary institutions in Anambra State, Nigeria. Specifically, the study sought to do the following:

1. To investigate the nature of relationship that exists between idealized influence and organizational success.
2. To investigate the extent of relationship that exists between inspirational motivation and organizational success.
3. To examine the nature of relationship that exists between intellectual stimulation and organizational success.
4. To examine the extent of relationship that exists between individualized consideration and organizational success.

2. REVIEW OF RELATED LITERATURE

Transformational Leadership

Burns (1978) defines transformational leadership as a process in which leaders and followers always try to advance their psychological ability and motivation to higher levels. Simola, Barling & Turner (2012) view transformational leadership as a type of leadership in which interactions between interested parties are arranged around a unified goal in a way that changes, drives and empowers followers' ethical actions and aspirations. Transformational leadership is a leadership style that requires positive change in the future and produces the

change needed through organizational planning and structure (Peter & James, 2013). Marshall (2011) believes that transformational leadership is all about change. The change focused on changing organizational mission, vision, values, performance and the like to achieve maximum efficiency and quality in product and service delivery. They want to change the existing structure and encourage people to buy a new vision and new possibilities. Lussier, & Achua (2010) reiterated that transformational leadership is used to change the status quo by drafting followers of the problems of the current system and a compelling vision of what a new organization could be.

Dilts (1996) points out that transformational leadership can be viewed from two perspectives: vision and action. Vision is associated with creating images of future goals while action is about performing immediate behavior. Transformational leaders inspire, motivate, and encourage followers to achieve extraordinary results. Transformational leaders motivate and move others to do more than initially planned and often even more than they thought possible. They set more difficult expectations and generally achieve higher performance. During this process, followers develop their leadership capacity (Avolio & Bass, 2002; Bass & Riggio, 2006; and Marshall, 2011). Nonetheless, Yadav & Agrawal (2017) highlighted the challenges that transformational leaders may face in their leadership process; dynamic nature of the organization, how to inspire followers, how to implement changes, lack of honest feedback, lack of skills to lead from a place of influence rather than authority, lack of emotional intelligence, communication and functioning between the teams and across the organization, challenge for a broader knowledge, the demand for qualified talents and the information overload.

Dimensions of Transformational Leadership

Leithwood, Jantzi & Steinbach (1999) previously identified six dimensions of transformational leadership: vision and objectives, culture, structure, intellectual stimulation, individual support, performance expectation. Recently, Leithwood et al (1999) have redesigned their work to include four main dimensions of transformational leadership in schools:

1. Setting directions: Building a shared vision, fostering acceptance of group goals, high performance expectations.
2. Developing people: Providing individual support and consideration, intellectual stimulation, providing an appropriate model, redesigning the organization.
3. Building collaborative cultures: Restructuring, building productive relationships with families and communities, connecting the school to its wider environment, managing the instructional program.
4. Staffing the program: Providing instructional support, monitoring school activity, buffering staff from distractions to their work.

According to Bass & Avolio (1994) and Bass (1999), transformational leaders presents four factors commonly known as the "four Is" to bring major changes. The dimensions are; Idealized influence (II), Inspirational motivation (IM), Intellectual stimulation (IS) and Individual consideration (IC).

1) Idealized Influence: According to Stone, Russell & Patterson (2003) "idealized influence is charismatic element of transformational leadership". Charisma is the capability to "inspire a vision". It is the style by which the subordinates trust and stimulate their leader's behaviors, and they embrace their values and commit to achieve their vision which maximizes self-confidence and the pride of participate with the leader. Yukl (2006) stated that ideal influence behaviors elicit strong subsequent emotions and identification with the leader. According to Bass & Riggio (2006) and Avolio & Bass (2002), leaders with great deal of idealized influence are willing to take risk calculations and are "consistent in ethical and moral conduct rather than arbitrary". According to Banjeri & Krishnan (2000), followers describe their charismatic leaders as causing followers to become enthusiastic about tasks, command respect, and experience a sense of mission conveyed to their followers.

2) Inspirational motivation: Here, Bass & Riggio (2006) state that transformational leaders behave in such a way as to motivate and inspire their followers. It confirms the behavioral style and the communication which directs

the subordinates and makes them feel the value and the challenges of the work. Transformational leaders depict intense interest and confidence which has a direct positive effect on subordinate's life and imposes the feeling of group spirit and inspires others with what they say and do, their vision does not mislead others, but allows them. Banjeri & Krishnan (2000) relate inspirational motivation to the concepts of ethics, and argue that when leaders show concern for successive organizational vision and motivation, they are more likely to make ethical decisions.

3) The Intellectual Stimulation: According to Bass & Riggio (2006) and Avoio & Bass (2002), Intellectual Stimulation is the ability of transformational leaders to stimulate the efforts of their followers to be innovative and creative, challenging assumptions, rethinking problems and approaching old situations in new ways. Intellectual stimulation explains how leaders inspire the creative and innovative ability of the follower. Creativity and innovation are encouraged. New ideas and creative solutions to problems are solicited from followers, who are included in the process of solving problems and finding solutions. Followers are encouraged to try new approaches, and their ideas are not criticized because they differ from the ideas of leaders, and furthermore, followers have never publicly blamed and criticized for making mistakes and mistakes (Bass & Riggio, 2006).

4) Individualized consideration: Yukl (2006) describes individualized consideration as the degree to which leaders provide support, encouragement and coaching to followers. Renjith, Renu & George (2015) believe that individualized consideration is the other characteristics of the quality of transformational leadership that refers to the attribute of being a compassionate leader. Bass & Riggio (2006) reiterated that the transformation leader recognizes individual differences regarding needs and wants and pays particular attention to each individual need. Each individual is different concerning their needs and wants. Each individual cannot be considered as one and treated in the same way. The leader understands the diversity of interests. Transformation leaders accept and consider individual difference and treat it with respect accordingly. Individual considerate leaders have the ability to identify and understand the needs and requirements of each follower for success and growth as a mentor and to pay particular attention to this (Avoio & Bass, 2002).

Organizational Success

Organizational success refers to the process by which the underlying strategic intentions (vision statement, mission statement and business objectives) set out by the organizations are attained. For organizational success to be attained there must be a good strategic intent, a philosophy and a series of programs and objectives focused on the skills and talents of its employees. All of this must be managed with care and guidance in order for the organization's mission to be successfully accomplished. Successful organizations need both inspiring leaders and good managers. To achieve increased and lasting results, organizations must implement strategies and mobilize employees. Success is measured by analyzing the position of the organization in relation to its objectives and mission. Organizations need to think about the future of their business and think of better ways to succeed. Organizations can view their challenges as competing with others or as opportunities to push them closer to reaching their full potential. The path they choose to take determines whether or not they succeed (<https://study.com/academy/lesson/organizational-success-factors-definition-quiz.html>).

Gozukara (2016) posits that organizational success is based on several factors such as financial and technical resources, logistics, technology and human resources. Combination of all such factors brings the achievement of goals in an organization. This, in turn, drives organizations to seek out the best people to lead and manage this process. The organizational expectation of leaders is to possess specific characteristics that will allow positive organizational results. Bylahalli (2017) also opines that successful organizations must focus of the following 4Cs namely; customers focus, culture, credibility and core competency. In addition, organizational success can be measured by the following parameter; employee satisfaction, customer relationship, communication, brand image, trust, customer frustration, distractions, personal relationship, project management and employee talent and skills. There are four steps that leaders can use to ensure that their organizations are not simply reacting to the challenges they face, but that they have a clear understanding of what their organization needs to do to be successful. These steps include;

a) Setting clear goals.

- b) Define plans that fit the organisation.
- c) Do not let external factors shift the focus.
- d) Communicate review work progress often to keep everyone on track.

Empirical Link between Transformational Leadership and Organizational Success

Khalil & Sahibzadah (2017) investigated the relationship between leader's individualized consideration and employee job satisfaction. The study found that individualized consideration and job satisfaction were positively correlated; meaning that an increase in the leaders individualized consideration would result to increased levels of employee job satisfaction. The study advocates that if leaders of organizations show individualized consideration, it will prove to be very effective in achieving employee satisfaction with their organizations.

Ogola, Sikalieh & Linge (2017) investigate the effect of individualized consideration leadership behaviour on employee performance in Small and Medium Enterprises in Kenya. This study targets the 100 top KPMG SMEs of 2014 in Kenya. The findings depict that individualized consideration leadership behaviour and Employee Performance in SMEs in Kenya had a strong positive and significant correlation ($r(194) = .925, p < .000$), and a positive and significant relationship ($\beta = .925, t(194) = 33.669, p < .000$). The study concluded that high performance is achieved when the leader recognizes employees' efforts, builds confidence, encourage self-development practices, effective communication as well as mentoring and coaching.

Sahibzada, Kakakhel & Khan (2016) examined the role of leader's idealized influence and inspirational motivation on employee's job satisfaction. The study found there is a strong positive correlation between the two components of transformational leadership (idealized influence and inspirational motivation) and employee job satisfaction. This implies that an increased in the level of idealized influence and inspirational motivation leads to an increase in the employee job satisfaction in organizations. According to the finding 71.6% of the variance in the employee job satisfaction is accounted for individualized influence while 67.2% variance in the employee job satisfaction is contributed by inspirational motivation.

Orabi (2016) investigated the role of transformational leadership and their influence on organizational performance in three banks operating in Jordan. The study revealed that in the life of a transformational leader the three elements of his composition (inspirational motivation, intellectual stimulation, and individual consideration); contributed to 81.6 percent of the variance in organizational performance. Leaders may need to focus on these elements of transformational leadership to improve outcomes for organizational performance.

Evelyn & Hazel (2015) examined the effects of transformational leadership on organizational performance with specific interest in the mediating role of employee engagement. The study shows that both transformational leadership and employee engagement has positive relationship with organizational performance. Three of the four characteristics of transformational leader; inspirational motivation, intellectual stimulation and individualized consideration was discovered to be positively related to both employee engagement and organizational performance. Idealized influence of leader was however discovered to having a negative relationship to both constructs. Employee engagement moderates the relationship between transformational leadership and organizational performance.

Al-Qura'an (2015) explored the impact of the transformational leadership on organizational change management at Jordan Ahli Bank. The study showed that the dimensions of transformational leadership (idealized influence, inspirational motivation, intellectual stimulation, individualized consideration and empowerment) affect the management of organizational change at the structural, technological and human level in Jordan Ahli Bank from the perspective of the branch managers at Jordan Ahli Bank.

Ahmad, Abbas, Latif & Rasheed (2014) examined the effect of Transformational Leadership on Employee Motivation in Telecommunication Sector in Punjab. The study found there is a positive and strong correlation between the idealized influence, individualized consideration, intellectual stimulation and inspirational

motivation and employee motivation. Thus, the study also confirmed that employee motivation has positive and strong correlation with transformational leadership.

Almintisir, Akeel & Subramaniam (2013) investigated the relationship between transformational leadership variables and employee motivation in public institutions in Libya. The variables are idealized influence, inspirational motivation, individualized consideration and intellectual stimulation. Intellectual stimulation, inspirational motivation and individualized consideration were found to be related to motivation. Together they contributed 73.7% to the change in motivation. Intellectual stimulation was discovered to contribute most to the change at (66.4%), inspirational motivation (6.4%) and individualized consideration (0.90%). The relationship between idealized influence of leaders and employee motivation was found to be unimportant.

Conceptual Framework

The framework for this study is presented in Figure 1 below that shows the relationship between dependent variable organizational success and four transformational leadership style variables as independent variables.

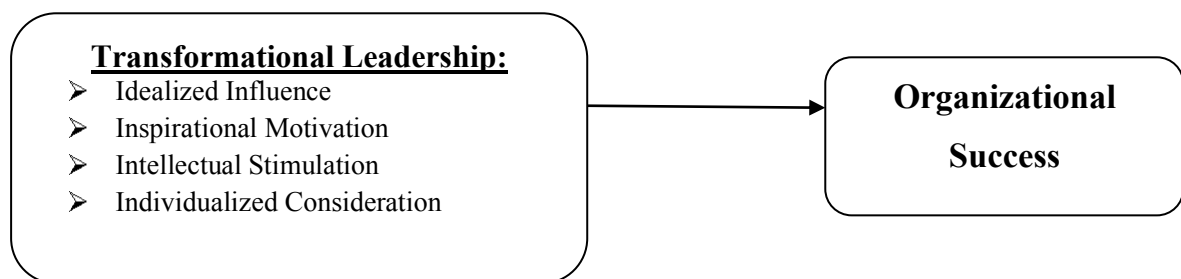


Figure 1: Conceptual Framework between Transformational Leadership and Organizational Success

Based on the conceptual model, the study proposed the following hypotheses:

- H₁: There is a significant relationship between idealized influence and organizational success.
- H₂: There is a significant relationship between inspirational motivation and organizational success.
- H₃: There is a significant relationship between intellectual stimulation and organizational success.
- H₄: There is a significant relationship between individualized consideration and organizational success.

5. METHODS

A cross-sectional survey research design was adopted by this study given that data for the study was collected through questionnaire from sampled respondents. The study population from which the sample was drawn for the study consists of academic staff on the rank of Senior lecturers, Associate Professors, Professors from two universities in the Anambra State, South East Nigeria namely (Nnamdi Azikiwe University Awka and Chukwuemeka Odumegwu Ojukwu University Uli). A non-probability or convenience sampling technique was used. This technique is known as deliberate sampling or random sampling which gives the discretion of a researcher to explore all available subjects while conducting a study. A total of 325 staff members from each university were surveyed in this study and the total number of employees was increased to (N) 650. However, 154 usable copies of the questionnaires were finally collected and are used in the analysis of data.

A structured questionnaire was used as a research tool. The multifactor leadership questionnaire (MLQ) developed by Bass & Avolio (1994) was used to measure transformational leadership variables, while the organizational success questionnaire (OSQ) was measured using a five-element scale developed and validated by the researcher. A 5-point Likert scale ranging from 1 to 5 as follows: 1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree was used to obtain respondents' responses. Face validity of the instrument was achieved with the help of three university subject experts. Reliability of the instrument was determined using the Cronbach alpha method. Reliability for dimensions of transformational leadership ranged from

idealized influence (0.802), inspirational motivation (0.753), intellectual stimulation (0.854) and individualized consideration (0.978), and organizational success (0.978).

Table 1: Reliability statistics of the dimensions in the questionnaires

S/N	Scale	Number of items	Coefficient
1	Idealized Influence	4	.802
2	Inspirational Motivation	4	.753
3	Intellectual Stimulation	5	.854
4	Individualized Consideration	4	.978
	OVERALL	17	.847

1	Organizational Success	4	.978
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According to Nunnally (1978) if the Cronbach's Alpha value goes beyond 0.7, it represents satisfactory internal consistency. Since the overall reliability of questionnaire is above 0.70, the questionnaires were administered and collected personally by the researcher to ensure better response rate. Statistical Packages for Social Science (SPSS) is used to perform the data analysis. Pearson correlation analysis was carried out to determine the relationship between the independent variables and the dependent variable. Significance level was set at $p = 0.05$.

Model Specification:

The researcher estimated model in the following form:

$$OS_{it} = \alpha_0 + \beta_1 IIN_t + \sum_{it} \text{-----} \quad (i)$$

$$OS_{it} = \alpha_0 + \beta_1 IM_t + \sum_{it} \text{-----} \quad (ii)$$

$$OS_{it} = \alpha_0 + \beta_1 IS_t + \sum_{it} \text{-----} \quad (iii)$$

$$OS_{it} = \alpha_0 + \beta_1 IC_t + \sum_{it} \text{-----} \quad (iv)$$

Where;

The dependent variable: Organizational Success

The independent variables:

IIN = Idealized Influence

IM = Inspirational Motivation

IS = Intellectual Stimulation

IC = Individualized Consideration

α_0 = slope of the model

$\beta_1, \beta_2, \beta_3, \beta_4$ = coefficient of parameters

i for the financial year ending at year t.

6. DATA ANALYSIS AND RESULTS

H₁: There is a significant relationship between idealized influence and organizational success.

Table 2: Correlation Analysis for Idealized Influence and Organizational Success

Correlations

		Idealized Influence	Organizational Success
Idealized Influence	Pearson Correlation	1	.731**
	Sig. (2-tailed)		.000
	N	154	154

Organizational Success	Pearson Correlation	.731**	1
	Sig. (2-tailed)	.000	
	N	154	154

** . Correlation is significant at the 0.01 level (2-tailed).

Computation: SPSS Ver. 20

Table 2, revealed a significant positive correlation between idealized influence and organisational success in two selected universities, which was statistically significant as shown in the result was ($r = .731$, $N = 154$ and $p = .000$) thus we reject the null hypothesis and conclude there is a significant relationship between idealized influence and organizational success.

H₂: There is a significant relationship between inspirational motivation and organizational success.

Table 3: Correlation Analysis for Inspirational Motivation and Organizational Success
Correlations

		Inspirational Motivation	Organizational Success
Inspirational Motivation	Pearson Correlation	1	.431**
	Sig. (2-tailed)		.000
	N	154	154
Organizational Success	Pearson Correlation	.431**	1
	Sig. (2-tailed)	.000	
	N	154	154

** . Correlation is significant at the 0.01 level (2-tailed).

Computation: SPSS Ver. 20

The result of second hypothesis indicated a positive correlation between inspirational motivation and organizational success. Pearson product correlation of IM and OS is statistically significant ($r = 0.431$, $N = 154$, $p = 0.000$ or $p < 0.05$). This shows that an increase in the level of inspirational motivation of the leader would lead to an increased organizational success.

H₃: There is a significant relationship between intellectual stimulation and organizational success.

Table 4: Correlation Analysis for Intellectual Stimulation and Organizational Success
Correlations

		Intellectual Stimulation	Organizational Success
Intellectual Stimulation	Pearson Correlation	1	.343**
	Sig. (2-tailed)		.000
	N	154	154
Organizational Success	Pearson Correlation	.343**	1
	Sig. (2-tailed)	.000	
	N	154	154

** . Correlation is significant at the 0.01 level (2-tailed).

Computation: SPSS Ver. 20

The result in table 4 shows a positive correlation between intellectual stimulation and organizational success. Pearson product correlation of IS and OS have statistically significant ($r = 0.343$, $N = 154$, $p < 0.05$). This shows that an increase in the level of intellectual stimulation of the leader would lead to an increased organizational success.

H₄: There is a significant relationship between individualized consideration and organizational success.

Table 5: Correlation Analysis for Individualized Consideration and Organizational Success
Correlations

		Individualized Consideration	Organizational Success
Individualized Consideration	Pearson Correlation	1	.548**
	Sig. (2-tailed)		.000
	N	154	154
Organizational Success	Pearson Correlation	.548**	1
	Sig. (2-tailed)	.000	
	N	154	154

** . Correlation is significant at the 0.01 level (2-tailed).

Computation: SPSS Ver. 20

The result in table 5 shows a positive correlation between individualized consideration and organizational success. Pearson product correlation of IC and OS have statistically significant ($r = 0.548$, $N = 154$, $p < 0.05$). This shows that an increase in the level of individualized consideration of the leader would lead to an increased organizational success.

Discussion of Findings

The main aim of this study was to determine the nature of relationship between transformational leadership style dimensions of idealized influence, inspirational motivation, individualized consideration and intellectual stimulation on organizational success in tertiary institutions. Four hypotheses were proposed and tested in this study.

The study endorses that there is a positive relationship between idealized influence and organizational success; implying that enhancement of idealized influence leads to better success. This is in agreement with the work of Sahibzada, Kakakhel & Khan (2016), Yukl (2006), and Bass & Riggio (2006), whom asserted that idealized influence is positively correlated to organizational success. The result of second hypothesis showed that organizational success increases significantly when leaders inspire followers to reach higher sense from their work. The finding is consistent with views of Bass & Riggio (2006), Ahmad, Abbas, Latif & Rasheed (2014), Sahibzada, Kakakhel & Khan (2016), who reported that an increase in the level of inspirational motivation of the leader would lead to an increased organizational success.

The result of the third hypothesis revealed there is significant relationship between intellectual stimulation from the leader and organizational success. The result is consistent with findings of previous researchers like Almintisir, Akeel, & Subramaniam (2013), Bass & Riggio (2006) and Avoio & Bass (2002) who asserted that through support, leaders can create intellectual stimuli in employees which would motivate employees to engage their cognitive ability in thinking on how to solve both job related and collective challenge. The findings also indicate there is significant positive relationship between individualized consideration provided by the leader and organizational success. The result is consistent with those findings of Shibru & Darshan (2011), Bass & Riggio (2006) who affirmed that organizational success increases significantly when leaders pay additional consideration to each follower's enhancement necessities and establishing close association.

7. CONCLUSION AND RECOMMENDATIONS

Tertiary institutions set specific strategic intentions that can only be achieved through effective leadership. In this evolving academic environment, a new leadership style is needed that has the ability to cope with and implement strategic intentions. Transformational leadership has been presented as an effective leadership style that has been implemented to address the turmoil in academics today. Transformational leadership is a critical success factor that can be brought about changes in employees and universities as a whole. Therefore, with the implementation of transformational leadership components, there will be a radical change in the management of universities and its employees which in turn will improve organizational success.

However, based on the findings of the study the following recommendations were made:

1. Idealized influence of transformational leadership which was the least practiced of the four dimensions should be continuously improved by valuing the individual contributions of employees to the institution, so that universities can be sustained as learning organisation.
2. Management at all levels in the Universities should provide proper self-development plan and build teamwork to ensure continued optimism and enthusiasms within their employees.
3. Communication and listening to employees concerns and spending time mentoring and coaching employees should be at the heart of every University management to achieve organizational success.
4. All dimensions of transformational leadership should be adopted by university management since this has been found to affect organizational success.

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APPENDIX I**TRANSFORMATIONAL LEADERSHIP AND ORGANISATIONAL SUCCESS: EVIDENCE FROM TERTIARY INSTITUTIONS**

This study was set to examine how transformational leaders can bring organizational success in the academic environment. This study specifically examines how senior academics can help improve the academic excellence of the junior academia so as to achieve organizational success.

Please tick (√) in the appropriate column that represents your opinion in each statement. Keywords are as follows: SA- Strongly Agreed, A- Agreed, N- Neutral, D- Disagreed, and SD- Strongly Disagreed.

S/No	Items	SA	A	N	D	SD
	Idealized Influence					
1	There is a display of sense of power and confidence					
2	Academics goes beyond their self interest for the greater good of the institution					
3	Academics talk about their most important values and beliefs					
4	Academics emphasize the importance of collective mission					
	Inspirational Motivation					
5	Academics talks enthusiastically about what needs to be accomplished					
6	There is an articulated and compelling vision for the future					
7	There is express confidence that goals will be achieved					
8	Academics encourages team-spirit and general enthusiasm					
9	Academics talk optimistically about future					
	Intellectual Stimulation					
10	They seeks different perspectives when solving problems					
11	They get others to look at problems from differing angles					
12	They encourage non-traditional thinking					
13	They suggest new ways of looking at completing assignments					
14	They re-examine critical assumptions to questions					
	Individualized Consideration					
15	Senior academics treats me as an individual rather than just a member of the group					
16	Senior academics spend time coaching and teaching followers					
17	They consider an individual as having different needs, abilities, and aspirations from others					
18	They help me develop my strengths					
	Organizational Success					
19	Frequent communication with employees assures loyalty and promotion of their values					
20	Competence and value creation is encouraged to ensure performance of the organisation					

21	Management credibility and reputation is of utmost importance					
22	The organizational resources are allocated accordingly to enhance efficiency and effectiveness					
23	Ability to adapt to change and encourage innovation is a priority					

The Effect of Perceived Value and Service Quality on Depositor Loyalty

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Abstract

For a bank, the depositors are the primary assets. Therefore, the bank should maintain a good relationship with them to be loyal to all efforts. If they are faithful, they will always keep putting their money in the bank. Therefore, the bank can execute the intermediate function properly. This study intends to examine the effect of perceived value and service quality on depositor loyalty. Consequently, the depositors of commercial bank H at branch F in Bandung become the population and the samples. This study also uses the Slovin formula, simple random sampling, and survey to calculate the samples, grab them, and accumulate the primary data. Moreover, the gathered data get analyzed by the structural equation model (SEM) based on variance. To sum up, this study proves that the perceived value and service quality positively affect depositor loyalty after examining the proposed hypotheses. To increase depositors to be loyal, the bank has to focus on elevating their perceived value and giving them superior service.

Keywords: Commercial Bank, Depositor Loyalty, Perceived Value, Service Quality

I. INTRODUCTION

A bank performs as an intermediary financial institution in a state economic (Taswan, 2010). Through this role, the bank distributes money from depositors to borrowers in loans; therefore, it can produce profits (Husnan, 2015). To support this condition, the bank marketing staff needs to maintain a relationship with depositors (Chatterjee & Kamesh, 2019) and attempts to retain them (Narotama, 2019).

As one of the private banks operating in Bandung, Bank H offers something interesting to time depositors to continually desire to place their money. For example, the bank already gives a higher interest and cashback to them if they add their money for a specific duration. However, this effort makes them, especially in the priority segment¹, withdraw all money in their deposit saving account in branch office F; for that reason, their status becomes the unqualified depositors. Table one shows the increase in the number of unqualified depositors in the

¹ The priority segment is the name given by bank for the group of depositors placing 500 million rupiahs or more.

priority segment from January to December 2019. During this year, this number gets increased from 628 to 657. The highest of 669 is in October. Conversely, the lowest of 628 is in January. This condition makes the bank lose the opportunity to use at least 500 million rupiahs if this status occurs.

Table 1: The number of unqualified depositors (UD) in the priority segment in the year 2019 of Branch F of Bank H of in Bandung

Month	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec
The number of UD in priority segment	628	639	639	637	644	641	647	652	652	669	657	652

Source: Processed data of Branch F of Bank H

This situation makes the research of the determinants of consumer loyalty in the bank to do. According to the evidence of the previous study, they are perceived value (Jumanev, Kumar, & Hanaysha, 2012; Hasan, Kiong, & Ainuddin, 2014; Rahi & Ghani, 2016; Mukerjee, 2018; Fitri, Basrib, & Maryanti, 2019) and service quality (Hidayat, Akhmad, & Mahmud, 2015; Alnaser, Ghani, Rahi, Mansour, & Abed, 2017; Al-Areqi, Al-Hadeq, & Mutahar, 2018; Setiawan, Kusumawati, & Mawardi, 2018). Unfortunately, this indication associated with these determinants does not reach a consensus yet.

- In their research in the banking sector, Jumanev et al. (2012), Hasan et al. (2014), Rahi & Ghani (2016), Mukerjee (2018), and Fitri et al. (2019) find a positive effect of perceived value on consumer loyalty. Furthermore, Nursiana (2011), Koupai, Alipourdarvish, & Sardar (2015) find no impact.
- In the same sector, Hidayat et al. (2015), Alnaser et al. (2017), and Al-Areqi et al. (2018) demonstrate a positive effect of service quality on consumer loyalty. However, Setiawan et al. (2018) depict a negative. Moreover, Fitri et al. (2019) and Narotama (2019) display no impact.

The purpose of this study attempts to examine and analyze the effect of perceived value and service quality on the depositor loyalty in this bank branch by considering this contrary evidence. By this study, we expect a clear sign of these two effects. Therefore, the study confirmation can be executed, and the results are expected to help this bank upturn their depositor loyalty.

Perceived value is the ratio between consumers' benefits and cost when consuming company services (Kertajaya, 2007). As shown by Jumanev et al. (2012), as a company, ideally, the banks exist to create and deliver a good perceived value is to make their depositors loyal. This explanation obtains support from other scholars, such as Hasan et al. (2014), Rahi & Ghani (2016), Mukerjee (2018), and Fitri et al. (2019). Based on these explanations, the first hypothesis can be proposed like this.

H₁: Depositor loyalty in the bank will be positively affected by perceived value

Service quality is the service conformity to what the firm promises to its customers (Parasuraman, Zeithaml, & Berry, 1985). By referring to this statement, service quality measures something that depositors get based on bank promises. In their study, Hidayat et al. (2015) find that the bank can elevate depositors' loyalty by good service quality. This evidence is also in line with Alnaser et al. (2017) and Al-Areqi et al. (2018), who confirm this evidence. Based on these explanations, the second hypothesis can be proposed like this.

H₂: Depositor loyalty in the bank will be positively affected by service quality.

II. RESEARCH METHOD

2.1. Variable definition

The variable employed consists of two kinds. First, the explanatory variable: perceived value and service quality. Second, the explained variable: depositor loyalty. The measure of depositor loyalty refers to Widowati & Tsabita (2017). Meanwhile, the proxy of perceived value and service quality denotes Roic et al. (2006) and Tjiptono, Chandra, & Diana (2004), respectively.

- According to Widowati & Tsabita (2017), depositor loyalty has three items, i.e., I always utilize this bank services (DL1); I want to suggest this to my working partner as the place of the financial transaction (DL2); unlike the others, this bank gives me something unique (DL3).
- According to Roic et al. (2006) and Tjiptono et al. (2004), perceived value and service quality have some dimensions and indicators. Moreover, they can be seen in Tables 2 and 3.

Table 2: The dimensions and items of perceived value

Dimension	Item
Functional facility value	Facilities offered by this bank reinforce the transaction secret and privacy (FFV1)
	The system in this bank has good order and working management (FFV2).
	The waiting room for depositors to transact is large, modern, and spotless (FFV3).
	The facilities can be professionally utilized (FFV4).
Functional personal value	The employees know their job well (FPERV1).
	The knowledge of employees is updated well (FPERV2).
	The employees can provide valuable information (FPERV3).
	The information about the product offered by the employees is all-inclusive (FPERV4).
Functional service value	The quality of this bank is verified well (FSV1)
	This bank retains its quality continually (FSV2)
	The quality of this bank is better than that of others (FSV3)
	This bank always realize its promises (FSV4)
Functional price value	The interest payment for depositors is determined (FPRV1).
	I am ready to pay for the bank service charges (FPRV2)
	The total charges of this bank make me reasonably think (FPRV3).
Emotional value	I am glad about the financial contract offered by this bank (EV1).
	I am comfortable with bank services (EV2).
	The employees of this bank give me a positive value (EV3).
	The employees of this bank do not disturb me during the service (EV4).
	Overall, I am relaxed with all the bank service (EV5).
Social value	Society assumes the services of this bank is good (SV1)
	My coming to this bank is assumed satisfactory by the people who recognize me (SV2)

Source: Roic et al. (2006)

Table 3: The dimensions and items of service quality

Dimension	Item
Tangible	This bank has modern transaction devices (T1).
	The facilities owned by this bank are visually eye-catching (T2)
	The employees of this bank wear their uniforms neatly (T3).
	The services in this bank are written (T4).
Empathy	The employees of this bank give special attention to me (EMP1).
	Banks have operating hours to make customers feel comfortable (EMP2).
	These bank employees pay special attention to their customers (EMP3).
	The employee of this bank prioritizes the interests of its customers (EMP4)
	The employees of this bank understand the unique needs of their customers (EMP5).
Responsiveness	The employees of this bank inform me about when the services are given (RES1).
	The employees of this bank serve me quickly (RES2).
	The employees of this bank are always ready to assist me (RES3).
	The employees of this bank take their time to serve me (RES4).
Reliability	This bank always fulfills its promises to me (REL1).
	This bank gives solutions to me (REL2).
	This bank gives the service to me according to the time established (REL3).

Table 3: The dimensions and items of service quality

Dimension	Item
	This bank put forward the accuracy to serve me (REL4).
Assurance	The employees of this bank try to make me believe its services (A1).
	I am safe to transact with this bank (A2).
	The employees of this bank are polite to me (A3)
	The employees of this bank can answer all of my questions (A4).

Source: Modified from Tjiptono et al. (2004)

2.2. Method to collect data

The survey becomes the method to bring the data together. In this way, according to Hartono (2012), the distribution of questionnaires is essential. Furthermore, the 5 points of the Likert scale are used to quantify the reactions of customer loyalty and two dimensions of perceived value and service quality items

2.3. Population and Samples

The depositors of bank H at branch FA become the population (N) with their sum of 1000. The Slovin formula with the residual margin (RM) of 5% is utilized to decide the sample size (SS) by mentioning Suliyanto (2009). This formula can be seen in the first equation.

$$SS = \frac{N}{1+N.RM^2} \dots\dots\dots (1)$$

By this formula, the sample size is $\frac{1,000}{1+1,000(0.05*0.05)} = 285,71 \approx 286$. Then, the depositors becoming the sample are occupied by a simple random sampling method. Unfortunately, the total depositors participating in this survey are only 80 people. Hence, the response rate is 27.97%. This rate is enough because of higher than 20%, as explained by Sugiyanto, Nahartyo, Misra, Bastian, Hartono, Saputro, Sholihin, Sivilokonon, Almahendra, Winardi, Rostiani, Warsono, Ciptono, & Widyaningsih (2018).

2.4. Method to analyze the data

By referring to the number of respondents of 60, this study uses the structural equation model based on variance to analyze the data. This model can be found in Figure 1, as shown below.

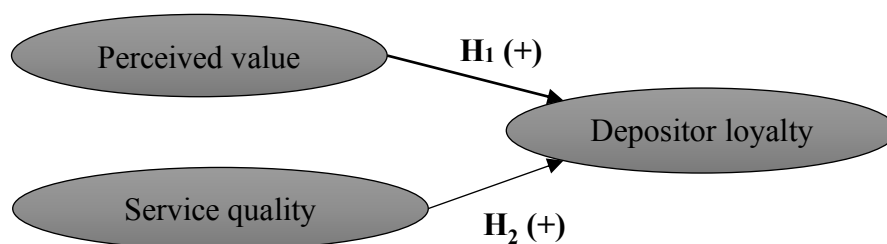


Figure 1: Research Model

The confirmatory factor analysis (CFA) and Cronbach Alpha (CA) analysis are utilized to test validity and reliability, one to one. The CFA attempts to know how accurate the answers of the respondents. To be precise, the loading factor of items should be higher than the cut-off point of 0.5 (Ghozali 2008). Meanwhile, the CA analysis intends to detect the consistency of respondents to answer the indicators. To be consistent, the CA coefficient of valid indicators has to be bigger than the cut-off value of 0.6 (Ghozali, 2006).

III. RESULT AND DISCUSSION

3.1. The demographic properties of respondents

Table 4 presents the demographic properties of the respondents joining this survey. They cover gender, age, duration to be a depositor, and occupation. Moreover, the frequency and its percentage are used to describe them.

Table 4: The demographic property of the respondents joining this online survey

The demographic property	Description	Frequency	Percentage
Gender	Male	30	37.50%
	Female	50	62.50%
	Total	80	100.00%
Age	18 – 20	15	18.75%
	21 – 30	20	25.00%
	31 – 40	25	31.25%
	61 – 70	20	25.00%
	Total	80	100.00%
Duration to be the depositor	Between one and three years	22	27.50%
	Between three and five years	18	22.50%
	Over five years	40	50.00%
	Total	80	100.00%
Occupation	Employee	20	25.00%
	Business owner	60	75.0%
	Total	80	100.00%

Source: Processed from the primary data

3.2. The test result of validity and reliability

After removing invalid items, the final test result of the dimension of perceived value's validity and reliability is displayed in Table 5. In this table, the item loading factor is between 0.622 and 0.996, which is higher than 0.5. Hence, the validity test is already reached. The Cronbach α coefficient of accurate items is from 0.675 to 0.990, which is above 0.6. Therefore, the reliability test is already attained.

Table 5: The loading factor and Cronbach Alpha of items of six dimensions of perceived value

Dimension	Item	Loading factor	Cronbach Alpha
Functional facility value	FFV1	0.996	0.990
	FFV2	0.956	
	FFV3	0.996	
	FFV4	0.996	
Functional personal value	FPERV1	0.989	0.940
	FPERV2	0.875	
	FPERV4	0.925	
Functional service value	FSV1	0.924	0.793
	FSV2	0.636	
	FSV3	0.622	
	FSV4	0.942	
Functional	FPRCV1	0.888	0.818

Table 5: The loading factor and Cronbach Alpha of items of six dimensions of perceived value

Dimension	Item	Loading factor	Cronbach Alpha
price value	FPRCV2	0.818	
	FPRCV3	0.864	
Emotional value	EV1	0.924	0.675
	EV2	0.924	
	EV3	0.748	
Social Value	SV1	0.898	0.759
	SV2	0.898	

Source: Modified Output of Warp PLS 7.0

When examining the validity and reliability of service quality, fortunately, we find that all the service quality dimension items are valid and reliable. This circumstance happens because all loading factor is between 0.635 and 0.962, which is higher than 0.5, and the Cronbach Alpha is from 0.844 until 0.951, which is above 0.6 (see Table 6).

Table 6: The loading factor and Cronbach Alpha of items of five dimensions of service quality

Dimension	Item	Loading factor	Cronbach Alpha
Tangible	T1	0.911	0.951
	T2	0.911	
	T3	0.962	
	T4	0.945	
Empathy	EMP1	0.939	0.935
	EMP2	0.900	
	EMP3	0.635	
	EMP4	0.879	
	EMP5	0.949	
Reliability	REL1	0.901	0.896
	REL2	0.906	
	REL3	0.788	
	REL4	0.910	
Responsiveness	RES1	0.844	0.844
	RES2	0.831	
	RES3	0.829	
	RES4	0.891	
Assurance	A1	0.878	0.856
	A2	0.861	
	A3	0.817	
	A4	0.820	

Source: Modified Output of Warp PLS 7.0

When testing the validity and reliability of depositor loyalty, we obtain that the loading factor of DL1, DL2, and DL3 exceeds 0.5, i.e., 0.946, 0.967, and 0.982. Also, Cronbach Alpha for these items is 0.963, higher than 0.6 (see Table 7). Because of this situation, the validity and reliability tests are confirmed.

Table 7: The loading factor and Cronbach Alpha of items of depositor loyalty

Item	Loading factor	Cronbach Alpha
DL1	0.946	0.963
DL2	0.967	
DL3	0.982	

Source: Output of Warp PLS 7.0

3.3. The estimation result of the research model

Figure 2 below shows the estimation result of the structural equation model based on partial least square. In this figure, the probability value of the t-statistic of β_1 of 0.585 and β_2 of 0.355 is less than 0.000. Because these values are below the significance level of 5%, the positive impact of perceived value and service quality on depositor loyalty is present.

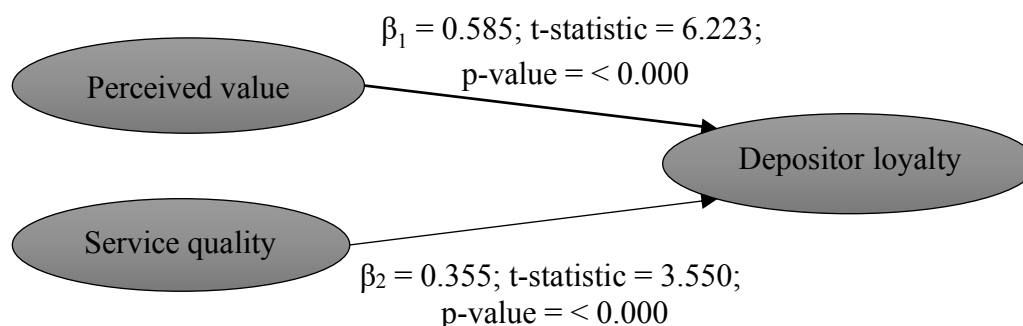


Figure 2: The estimation result of structural equation model based on partial least square

Source: Modified Output of Warp PLS 7.0

3.4. Discussion

From the research hypothesis examination, it is proven that perceived value positively influences depositor loyalty. The acceptance of this hypothesis supports the study result of Jumanev et al. (2012), Hasan et al. (2014), Rahi & Ghani (2016), Mukerjee (2018), and Fitri et al. (2019). In this study context, to get the depositors' dedication, the bank needs to pay attention to the facility, employee, service, price, emotional, social values with a low valid and reliable agreeing response, that is lower than 60%, as shown in Tables 8, 9, 10, 11, and 12.

- The survey associated with functional facility value displays that the agreeing response percentage is between 28.75% and 81.250, considered low to high (see Table 8). The small is on FFV1, FFV2, and FFV4. Therefore, the bank must create them to support depositors to transact (FFV1) and be effortlessly utilized by depositors (FFV4). Additionally, the bank essentially provides an excellent operating system to serve depositors (FFV2).

Table 8: The number of agreeing on responses to the functional facility value

Response	FFV1	FFV2	FFV3	FFV4
1 (strongly disagree)	0	3	0	0
2 (disagree)	0	8	9	0
3 (neutral)	57	46	15	57
4 (agree)	4	13	46	23
5 (strongly agree)	19	10	19	0
The total of the agreeing response (4 and 5)	23	23	65	23

Total respondents	80	80	80	80
Percentage of agreeing response	28.75%	28.75%	81.25%	28.75%

Source: Processed from the primary data

- The survey associated with functional personal value illustrates that the agreeing response percentage is between 17.50% and 28.75%, considered low (see Table 9). Therefore, the bank should train staff members and equip them with valuable information to serve depositors.

Table 9: The number of agreeing on responses to the functional personal value

Response	FPERV1	FPERVV2	FPERV4
1 (strongly disagree)	0	0	0
2 (disagree)	0	0	0
3 (neutral)	57	57	66
4 (agree)	13	23	4
5 (strongly agree)	10	0	10
The total of the agreeing response (4 and 5)	23	23	14
Total respondents	80	80	80
Percentage of agreeing response	28.75%	28.75%	17.50%

Source: Processed from the primary data

- The survey associated with functional service value demonstrates that the agreeing response percentage is 28.75% to 30.00%, considered low (see Table 10). Therefore, the bank should rebuild its quality so that depositors can trust it.

Table 10: The number of agreeing on responses to the functional service value

Response	FSV1	FSV2	FSV3	FSV4
1 (strongly disagree)	0	3	0	0
2 (disagree)	0	8	9	0
3 (neutral)	57	46	47	57
4 (agree)	4	13	24	23
5 (strongly agree)	19	10	0	0
The total of the agreeing response (4 and 5)	23	23	24	23
Total respondents	80	80	80	80
Percentage of agreeing response	28.75%	28.75%	30%	28.75%

Source: Processed from the primary data

- The survey associated with emotional value expresses that the agreeing response percentage is between 28.75% and 52.50%, considered low (see Table 11). Therefore, the bank has to make virtuous financial contact for depositors (EV1) and depositors comfortable with the provided service (EV2). Besides, the bank must train the staff members to positively value depositors (EV3).

Table 11: The number of agreeing on responses to the emotional value

Response	EV1	EV2	EV3
1 (strongly disagree)	0	0	0
2 (disagree)	0	0	0
3 (neutral)	57	57	38
4 (agree)	13	13	42
5 (strongly agree)	10	10	0
The total of the agreeing response (4 and 5)	23	23	42

Total respondents	80	80	80
Percentage of agreeing response	28.75%	28.75%	52.50%

Source: Processed from the primary data

- The survey associated with social value shows that the agreeing response percentage is 76.25% until 81.50%, considered high (see Table 12). It means the bank already effectively implements functional social value.

Table 12: The number of agreeing on responses to the social value

Response	SV1	SV2
1 (strongly disagree)	6	0
2 (disagree)	1	1
3 (neutral)	18	14
4 (agree)	34	22
5 (strongly agree)	27	43
The total of the agreeing response (4 and 5)	61	65
Total respondents	80	80
Percentage of agreeing response	76.25%	81.25%

Source: Processed from the primary data

From the research hypothesis examination, it is proven that service quality positively influences depositor loyalty. The acceptance of this hypothesis supports the study result of Hidayat et al. (2015), Alnaser et al. (2017), and Al-Areqi et al. (2018). In this study context, to get the depositors' dedication, the bank needs to pay attention to the list of valid and reliable service quality dimension indicators with the inadequate agreeing response (< 60%) (see Table 13). In this table, the intended answers are REL3, RES1, RES2, RES3, and A4, ranged from 42.50% to 57.5%. Hence, the bank should be on time to give the service to the depositors (REL3), train and equip the staff members with the product knowledge to provide a speedy response to serve the depositors (RES1, RES2, RES3, and A4).

Table 13: The number of agreeing on responses to items of reliability, responsiveness, and assurance

Response	REL3	RES1	RES2	RES3	A4
1 (strongly disagree)	0	0	0	0	0
2 (disagree)	3	0	0	2	0
3 (neutral)	33	36	34	44	42
4 (agree)	25	23	18	14	17
5 (strongly agree)	19	21	28	20	21
The total of the agreeing response (4 and 5)	44	44	46	34	38
Total respondents	80	80	80	80	80
Percentage of agreeing response	55%	55.00%	57.50%	42.50%	47.50%

Source: Processed from the primary data

IV. CONCLUSION

This research aims to investigate and analyze the effect of perceived value and service quality on depositor loyalty. By hypothesis testing on the perception of 60 respondents as the sample, this study successfully proves that a positive impact of two determinants is available. This research is not faultless because of owning several borders: the two determining variables and the few respondents as samples consisting of 60 depositors.

- Regarding the first issue, the next scholars can add the bank social responsibility, bank image, depositor satisfaction, commitment, trust, switching cost, relationship marketing to their model as the other determinants.

- b. Regarding the second issue, the next scholars can use all depositors in some branches for the same bank locating in a city or some cities to be the population. Therefore, they will own big sample size. By large sample, the result of hypothesis testing will be more precise.

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An Empirical Analysis of Key Antecedents of Workforce Diversity on Job Performance in Nigeria

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Abstract

The study examined the effect of workforce diversity on job performance. The employees' diversity were conceptualised in terms of gender diversity, age diversity, and educational background diversity. The study was underpinned by the social identity theory as it examined such characteristics as gender, age and education. The social identity theory infers that employees have a tendency of classifying themselves based on groups in which they fit in. The study area was public sector in Abuja, Nigeria. The study adopted the quantitative research design whereby questionnaires were administered to the participants. A sample size of 208 participants were drawn from a population of 452 employees of the government agency in Abuja using Raosoft sampling size calculator. However, only 137 valid questionnaires were retrieved from the participants. Therefore, the data analysis was based on the valid retrieved questionnaires. Data analysis and hypotheses test was done using multiple regression analysis. The results showed a significant relationship between the dimensions of the explanatory variables (gender diversity, age diversity and educational background diversity) and the outcome variable (employee performance). The study also revealed that the combination of gender, age and education were the core elements that explained employee performance by 62.9 percent. In terms of individual contribution, the results indicate that educational background diversity contributed most to the variation of employee job performance while both age and gender also contributed significantly. The study therefore recommended that leadership of organisations need to focus more on diversity management in order to integrate the diverse characteristics of the workforce within the organisation.

Keywords: Age, Educational Background, Employee Performance, Gender, Workplace Diversity

1. Introduction

Effective workforce diversity management is a key evolving conception in the contemporary world. Numerous scholars have previously studied and examined this concept (e.g. Evans & Henry 2007; Scott and Sims 2016; Sayers 2012; Leboho 2017 & Robbins, 2009). Managing diversity means recognising people's variances and identifying these variances as valuable; as much as it improves effective management practices by stopping discrimination and encouraging inclusiveness. Furthermore, handling diversity encompasses leveraging and the

usage of the cultural differences in people's skills, ideas and creativity to add to a common goal, and doing it in a way that gives the organisation a competitive edge (Morrison, 1992). Griffin & Van Fleet (2014), defined three basics that contributed to organisations becoming more diverse. Such factors were identified as globalization, government legislation and judicial regulations and composition of the labour force.

Nowadays, organisational workstation is shifting at an enhanced pace and the transformation in the employees' demographics, increase of jobs in the economy, continuing growth of the globalization and requirement for efficient and effective collaboration have appeared as important driving force for the diversity in organisations. Griffin & Moorhead (2014) indicated that having diverse workers entails that managers would recognise and handle the wide-ranging features that exist among the workers in the organisation.

Diversity antecedents or dimensions denote diverse traits, backgrounds and abilities of employees in an organisation. Rizwan, Khan, Nadeem, & Abbas (2016) discussed how diversity dimensions management determines negative or positive employee performance in an organisation. The diversity antecedents consist of age, ethnicity, education backgrounds, social-economic status and difference in religions, among other characteristics. Diversity dimension management involves planning and implementing systems and practices aimed at accommodating diverse groups of people, maximizing the benefits and minimizing the adverse effects of having a diverse workers (Rizwan *et al*, 2016).

Employee performance significantly determines organisational success or failure since organisations work through people (Hameed & Waheed, 2011). Therefore, employee performance discusses how well an employee discharges his or her duties and responsibilities, and creates an environment that improves the performance of the whole organization. The principles of employee performance include among others, employee relations, employee attitudes, employee turnover levels, creativity levels, and productivity levels. For the purpose of this study, three antecedents are examined. Such antecedents include gender, age and educational level. In order to become market leaders in this global business market, there is a major necessity for businesses to improve the performance of workers (Swaratsingh, 2015). Although the performance concept is very common in research, it is established and explained in various ways by different scholars.

1.1 Statement of the Problem

Globally, workforce diversity is perceived as a thought-provoking theme at the place of work and market. Organizations that support and attain an effective diverse workplace will appeal to and preserve quality workers and raise customer loyalty (Srivastava & Agarwal, 2012). This diversity is viewed as an affirmative dynamism for employees' job performance by one sector, (Choi & Rainey, 2010) whereas on the other term it is disapproving to employees' job performance. (Childs Jr, 2005) discusses how prior studies show that organizations with high levels of well-managed diversity are effective and direction-finding eventually creating corporate cultures that have new standpoints, pioneering competences, and fresh ideas which are necessary to survive. On the contrary, Choi and Rainey (2010) contended that workforce diversity produces conflicts and uncertainty in the workforce. Having high spot the potentials as well as flaws of workplace diversity, this study intends to examine some of the dimensions of workplace diversity which have not been given an adequate amount of research attention in exploring the variables that may influence employee performance such as gender, age and educational background diversities in the context of public sector in Nigeria generally and the organisation under study to be specific.

1.2 Objectives of the Study

- i. To examine the relationship between Gender diversity and Employee Performance.
- ii. To determine the association between Age diversity and Employee Performance.
- iii. To assess the connection between Educational Background diversity and Employee Performance.

2. Literature Review

2.1 Theoretical Review – Social Identity Theory

Social identity is described as the ways that people's self-concepts are based on their membership in social groups. This theory further clarified that an employee work behaviour is defined by the inside principles of the group to which they belong. Accordingly, this directly influences the performance of the employee. This theory opens up the need for this study to investigate how the phenomenon of age diversity, gender diversity, and educational diversity contribute towards employee performance.

This study was underpinned by the social identity theory proposed by Trajfel & Turner (1979) as it considers attributes such as gender, age and education which are being examined in this study. The social identity theory interprets that employees have a tendency of classifying themselves based on groups in which they fit in. Such group maybe be based on gender, age and education, amongst others. According to Trajfel & Turner (1979), these groups are the foundation of egotism and self-confidence or agony and low self-confidence.

2.2 Empirical Review and Hypotheses Development

Gender Diversity and Employee Performance

Numerous researchers have examined the connection between gender diversity and employee performance. These scholars have diverse perceptions with regards to engaging women in organisations is advantageous to the organisation or otherwise. Campbell and Minguez-Vera (2008) contended that the existence and recognition of women may well positively encourage their performance and raise organisational performance as they bring extra viewpoints to decision-making. Oxelheim (2006) cites instances of extra viewpoints that women bring such as improved innovation capability, better global market insight and greater awareness of diverse customer needs. Conversely, several scholars have shown that the existence of women in organisations might not be of advantage, especially if legal, political and societal demands for gender equality influence their appointment. The conclusions of several meta-analyses point out that professional diversity might be treated as a double-edged sword: in some cases it may be advantageous, while in others it will be injurious, and in several circumstances it varies little in an organisation's functioning (Turek, 2017).

Even though with time women will be offered equal employment opportunities, a barrier still subsists between employer's views vis-a-vis gender diversity (Fernandez & Lee, 2016). Sharma, (2015) discussed how there is no country so far has ever absolutely eliminated gender concerns such as discrimination, abuse and sexual harassment. Women are regarded as less skilled and less qualified for several jobs (Kundu, & Mor, 2017). Prior works of research have recommended that any organisation that regards gender diversity as one of its main concern stands a chance to keep a capable workforce and increase its performance (Sharma, 2016; Emiko & Eunmi, 2009). This can be underscored by the fact that women are considered as a very important economic unit of any society.

The rising general interest of organisational gender diversity has been recognised by both researchers and professionals and raised the question of whether organisational gender diversity affects the individual, group or organizational performance (Gupta, 2013). This explains to the extent of the performance of the level of analysis under scrutiny.

Brown, (2008) discussed how workforce diversity remains ineffectual if gender concerns are not first acknowledged. This assertion is in line with (Eagly & Wood, 1991) study which stated that a mixed-gender achieved better than the same gender groups. Therefore the importance of both genders cannot be overemphasised, as each complements the other. Well-balanced structure of gender diversity in the organization may possibly make synergy effects which add to the workers performance. The reason may not be far-fetched as Bhatt, Gupta and Bhatta (2019) note that both male and female employees possess diverse skills and experiences which enhance sturdiness, unity, creativity, and innovation for effective and efficient individual or organization performance. Several scholarly works have revealed that gender diversity is positively related to employee and organisational performance (e.g. Frink, Robinson, Reithel, Arthur, Ammeter, Ferris, Kaplan, & Morrisette (2003); McMillan-Capehart (2006); Eugene, Lee, Tan, Tee, & Yang (2011), Kyalo (2015), Ngao and Mwangi (2013), Selvaraj (2015) and Mwatumwa (2016).

On the basis of the above discussions, the study hypothesised as follows:

H₁: There is a statistical significant relationship between gender diversity and job performance.

Age Diversity and Employee Performance

Age diversity is defined as the extent to which a group or organization is heterogeneous with respect to the age of its members (Li, Chu, Lam, & Liao, 2011; Rabl & Triana, 2014). It is defined as the variances in age distribution among workers within the organization (Kunze, 2013). Furthermore age diversity is categorized in the social category diversity for its high visibility and low job-relatedness (Pelled, 1996). Age, as a type of physical composition characteristic, is eagerly noticeable (Wegge, Roth, Neubach, Schmidt, & Kanfer, 2008). Numerous scholarly works, show that age diversity has both plusses and minuses.

Age diversity has become an inevitable reality of life in numerous establishments (Kunze, Boehm, & Bruch 2011). The highpoints of age diversity include problem-solving skills in the organization will be enhanced as diverse age brackets bring their skills to bear in tackling organizational issues. Also, age diversity will help in gaining access to the talented people in the organization. Age-diverse employees offers a host of various knowledge, values, perspectives, interpretations and preferences which are conditions for innovation (Richard & Shelor, 2002). An admixture of young and old age bracket of employees with different knowledge and ideas can surge innovation as compared to having homogeneous employees (Backes-Gellner & Veen, 2013). It has been alluded severally that the younger generation, otherwise known as the millennial are proficient when it comes to innovations and creativity. Therefore, the older generation will bring their experiences to bear while the younger employees will bring creativity and innovation to bear. At the end, the organization will benefit from these arrays of age diversity. Age diverse employees gives a vast multitude of numerous skills, intellectual styles, morals, and preferences that may result in increased productivity (Boehm & Kunze 2015).

Lee and Kim (2020) contend that age diversity is expected to subvert the social assimilation of diverse workers as a result of strong social categorization-based processes. Against this backdrop, conditions considered by such low-quality relationships, workers feel less psychologically connected with the other members of their group and accordingly become indecisive to participate in communication and discussions (Milliken & Martins, 1996; Zenger & Lawrence, 1989). Poor communication, along with low-quality relationships at work, weakens successful work coordination (Smith, Smith, Olian, Sims, O'Bannon, & Scully 1994). Also, Mwatumba, (2016), discussed how age diversity causes issues related to communication and employees conflict. Against this backdrop, ineptitude of superiors to handle age diversity leads to conflict which lowers employees productivity (Mwatumba, 2016). Furthermore, Barton and Nickerson (2004) show that groups with more diversity in age have been notably less productive. Similarly, Backes-Gellner and Veen (2009) argued that age heterogeneity can undesirably affect workers' productivity as a result of variances in values and preferences of divergent age groups (as cited in Odhiambo, Gachoka, & Rambo, 2018). In the same vein, Elsaid (2012) showed that there is no relationship between age diversity and employee performance. Likewise, Kyalo and Gachunga (2015) and Selveraj (2015) showed that age diversity is not related to employee performance.

On the affirmative aspect of age diversity, Bohem and Kunze, (2015) stated how an age heterogeneous workforce can create vast amount of skills, intellectual styles, increases morals, that may result in increased productivity. This was buttressed by Backes-Gellner and Veen, (2009) study which stated that workers of diverse ages who work together in group enhance productivity than working alone since different people have different skills, perspectives, personality traits and a larger problem solving toolbox. This led to the conclusion of the studies conducted by Zhuwao, (2017) and Rizwan Khan, Nadeem and Abbas, (2016) respectively which show positive relationship between age diversity and employee performance. Finally, a diverse age group of employees would therefore be more creative, dynamic and productive than a homogeneous age group (Williams & O'Reilly, 1998; Zenger & Lawrence, 1989).

On the basis of the above discussions, the following hypothesis has been framed.

H₂: There is a statistical significant relationship between age diversity and job performance.

Educational Background and Employee Performance

Previous studies have shown that engaging employees from diverse educational echelons in the same workplace positively increases problem-solving, creativity and innovation (e.g. Pitts, Hicklin, Hawes, and Melton 2010). Bearing in mind workforce diversity benefits, management will work on increasing diversity to assuring innovation and creativity. Walster, Walster, and Berscheid (1978) stated that education support interactive participation and build constructive connections. Different educational backgrounds resulted in more task-related conflict among team members (Greer and Jehn, 2007). Accordingly, diversity in education levels can be associated with positive and negative effects on employee performance. Further, Webber and Donahue (2001) discussed how different educational backgrounds and levels appear to influence employee performance positively as it stimulates mutual learning with a wider range of cognitive resources and abilities. Educational diversity influences employees to work effectively with others to achieve organizational goals. The strategic objectives for human capital are to educate workers and get the most out of their knowledge, skills, and experience capabilities, in order to initiate organization value and improve its performance level (Hsiung and Wang, 2012), recognizing that knowledge creation is positively related to work performance (Ning, Chen, Yen, and Lun 2011). In fact, lower level for education and knowledge leads to poor efficiency. In furtherance to this, Eugene *et al.* (2011) recognised that there exists bias in educational diversity measure as it assesses diversity in workers who are exceedingly educated (Bachelor's degree and Postgraduate degree) and putting employees who are less educated in one group (e.g. Certificates and Diplomas).

Furthermore, Bamberger, Biron and Meshoulam (2014) noticed that informational diversity, such as education and functional areas, were positively related to actual work group performances, even though the relationship was mediated by task conflict. Additionally, Hambrick, Humphrey and Gupta (2015), stated that international experience and diverse educational background were positively related to firms' global, strategic postures among top management teams. In another study conducted by Elsaid (2012) with regards to Egyptian pharmaceutical industry showed that educational diversity was positively and significantly related to employee performance. Sequel to this results, Elsaid (2012) further clarified that more or balanced educational types may increase the likelihood of an organisation to benefit from increased creativity, innovation and improved employee performance. Additionally, in a study that focused on education sector in the context of Kenya conducted by Odhiambo (2014) discovered that educational diversity was significant in explaining a variation in employee performance. Similarly and in line with (Elsaid, 2012) study, Odhiambo (2014) found that having more diverse educational types in an organisation enhances problem-solving skills and decision-making amongst employees, accordingly resulting in improved employee performance.

Thus, the following hypothesis has been formulated:

H₃: There is a statistical significant relationship between educational diversity and employee job performance.

3. RESEARCH METHODS

3.1 Research Design

The study adopts a cross-sectional research design. According to Creswell (2013), definition of a cross-sectional research design was used to obtain a representative sample by taking a cross-section of the population of the organisation under study. Besides, since this study was intended at examine the relationship between the predictor variables (gender diversity, age diversity, and educational diversity) and the variable of interest (employee performance), a cross-sectional research design was more suitable. This is also in line with the study of Cohen, Manion and Morrison (2013) which specified that a cross-sectional research design is suitable for the descriptive functions that are related to correlational research.

3.2 Population and Sampling

Bell and Waters (2014) define a population as a total group of individuals or units that are of interest to the researcher and individuals at which the outcomes of the study can be generalized. In this study, the target total population consisted of 452 employees of the organization under study. This comprises both male and females. Similarly, this study adopts the probability sampling technique where simple random sampling technique was applied to ensure that every employee in the population has an equal chance of being selected, thus improving the representativeness of the sample.

3.3 Sample and Procedure

The extant research utilized a sample of 208 workers drawn from a population of 452 from a public organisation in Abuja Nigeria that engage diverse workgroups, using a Raosoft Sample size calculator (www.raosoft.com). The participants were asked for their level of agreement or disagreement with a number of statements using a 5 - point Likert scale.

4. DATA ANALYSIS

4.1 Response Rate

A response rate is the number of people who answered the survey divided by the number of people in the sample. A total of two hundred and eight (208) sets of questionnaire were administered and one hundred and thirty-seven (137) were returned duly completed, representing 66% response rate as shown in Table 1.

According to Sekaran (2003), a response rate of 30% and above was regarded as being acceptable. With the response rate of 66% from the 208 randomly sampled participants, it is considered good for the course of this study.

Table 1: Questionnaire Return Rate

Response Rate	Frequency	Percentage
Retrieved	137	66
Not Returned	71	34
Total	208	100

4.2 Reliability Statistics

A reliability statistics were done to measure the internal consistency of the variables. Its goal is to essentially test the internal consistencies and stability of the constructs by the use of the Cronbach Alpha Method. The reliability test is usually significant when Alpha value is 0.7 and above (Cronbach 1951). The value of Cronbach's Alpha was depicted in Table 2, where the reliability coefficient attained by all constructs was satisfactory as the combined alpha was 0.748 which is above 0.70; accordingly it showed high levels of reliability within the collected data of this research.

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.748	4

4.3 Correlation Analysis

The correlation analysis helped to determine the relationship between the explanatory variables and the outcome variable. Pearson's correlation coefficient was used to show the direction, strength, and significance of the

relationship. From the findings, it was found that there is positive association of gender diversity, age diversity, and educational background diversity, on employee job performance. In terms of strength, Cohen (1988) states that, if correlation (r) lies between .10 - .29 then there is a low effect (low correlation); r lies between .30 - .49 has a medium effect (moderate correlation) and r lies between .50 - .99 has a large effect (strong correlation). Thus, gender, age and educational background diversities have correlations of .511, .372 and .760 respectively. Therefore, the constructs' correlation strength are strong correlation, moderate correlation and strong correlation respectively as shown in Table 3.

Table 3: Correlations

		Emp_Perf	Gender	Age	Edu_Backg
Emp_Perf	Pearson Correlation	1	.511**	.372**	.760**
	Sig. (2-tailed)		.000	.000	.000
	N	137	137	137	137
Gender	Pearson Correlation	.511**	1	.228**	.491**
	Sig. (2-tailed)	.000		.007	.000
	N	137	137	137	137
Age	Pearson Correlation	.372**	.228**	1	.264**
	Sig. (2-tailed)	.000	.007		.002
	N	137	137	137	137
Edu_Backg	Pearson Correlation	.760**	.491**	.264**	1
	Sig. (2-tailed)	.000	.000	.002	
	N	137	137	137	137

** . Correlation is significant at the 0.01 level (2-tailed).

4.4 Hypothesis Testing

To test the research hypotheses, multiple linear regressions were used to examine the association between more than two independent variables and one dependent variable (Hair, Black, Babin & Anderson 2010). Regression analysis was conducted to test the formulated hypotheses in this study. Multiple linear regression analysis was implemented to assess whether the predictor variables (gender diversity, age diversity, and educational background diversity predict the variable of interest (employee job performance).

Table 4: Model Summary^b

Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.793 ^a	.629	.621	1.733	1.721

a. Predictors: (Constant), Edu_Backg, Age, Gender

b. Dependent Variable: Emp_Perf

To determine the extent to which the explanatory variables explain variation of employee job performance, the model summary was worked out. The results in Table 4 show that the coefficient of determination or R-square value is 0.629, thus meaning that gender, age and educational diversity can explain 62.9% of the outcome variable (employee performance). However, it still leaves out 37.1% (100%, - 62.9%) unexplained in this research. This implies that there are other additional important variables that have not been considered in this study and are vital in explaining variation in employee job performance.

Table 5: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	677.396	3	225.799	75.162	.000 ^b
	Residual	399.553	133	3.004		
	Total	1076.949	136			

a. Dependent Variable: Emp_Perf

b. Predictors: (Constant), Edu_Backg, Age, Gender

To test the statistical significance of the regression model on whether it is a good predictor of the variable of interest (employee job performance), Analysis of variance (ANOVA) was implemented. Accordingly, the results in Table 5 show that the model is a good predictor of the relationship between the independent variables (gender diversity, age diversity and educational diversity) and the outcome variable (employee performance) ($F = 75.162$; $p = 0.000$). This means that the predictor variables (gender diversity, age diversity and educational diversity) are significant in explaining the variance in the dependent variable (employee job performance).

Table 6: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics		
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	4.671	1.316		3.549	.001		
	Gender	.128	.049	.160	2.629	.010	.749	1.335
	Age	.144	.048	.167	3.026	.003	.918	1.090
	Edu_Backg	.536	.052	.638	10.351	.000	.735	1.361

a. Dependent Variable: Emp_Perf

Here in the coefficient Table 6, the standardized beta value would be taken into consideration. When analyzing the three independent variables, the significance values need to be less than 0.05 to accept as significant and the value of beta is positive which states that the impact is positive. To compare which explanatory variable between gender diversity, age diversity and educational diversity contributes most to the variation of employee job performance, beta standardized coefficients were used. Thus, the results in Table 6 indicate that educational background diversity contributed most to the variation of employee job performance ($\beta = 0.638$; $p = 0.000$), while age and gender diversity equally contributed $\beta = 0.167$; $p = 0.003$ and $\beta = 0.160$; $p = 0.010$ respectively. The high contribution of educational background diversity could be largely due to the cross-functional and multi-dimensional learning experiences that usually characterized both formal and informal education and learning which defines and guides job performance in the workplace; while the two variables appears as two most potent channels and drivers of learning diversity.

In the equation, $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \epsilon$
 $Emp_Perf = 4.671 + .128Gender + .144Age + .536Edu_Backg$

5. Discussion, Conclusion and Recommendations

This study examined the effect of workforce diversity on job performance. The proxies of employees' diversity were assessed in terms of gender diversity, age diversity, and educational background diversity. With regards to the results acquired by the regression analysis, it was discovered that there is positive and significant impact of workforce diversity on employee performance. The findings showed that there is positive and significant relationship between gender diversity, age diversity and job performance. The findings of this research work affirmed that increasing age diversity is positively related to employee performance. The results of the analysis indicated that there is significant and positive relationship between educational background diversity and employee performance. Prior scholarly works had shown that the same conclusion stating that gender diversity, age diversity and educational diversity were positively and significantly related to employee job performance (e.g. Mwatumba (2016); Ngao and Mwangi (2013) – for gender; Zhuwao, (2017) and Rizwan khan, Nadeem and Abbas, (2016) – for age diversity; and lastly for education level, the findings are in consonance with Hsiung and Wang, (2012) and Ning, Chen, Yen, and Lun (2011)).

On the basis of the findings, the study concluded that the dimensions of work diversity have significant effect on employee performance in the organisation under study. Gender, age, and education diversities are vital constituents of employees' activities in the work place that enrich employee performance. The study revealed that the

combination of gender, age and education were the core elements that explained employee performance by 62.9 percent. The study has presented an empirical evidence that there is a significant relationship between workplace diversity dimensions – gender, age, and education and employee performance of the organisation under study.

Therefore, this study recommended that leadership of organisations needs to focus more on diversity management in order to integrate the diverse characteristics of the workforce within the organisation. It was also recommended that organisational leaders should formulate policies on equal employment, irrespective of their gender, age, and educational background in order to bring to the fore, creativity and innovation to the organisation by an admixture of diverse workforce irrespective of cadre in the organisational ladder.

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The Impact of OJK Regulation No. 48/POJK.03/2020 on the Quality of Credit and Risk Management of Banking Credit

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Abstract

The COVID-19 pandemic, which is spreading rapidly throughout the world, has seriously harmed many countries, including Indonesia. Many things have been detrimental due to COVID-19, one of which is the economic aspect. This pandemic made it difficult for many debtors to fulfil their credit obligations that led the government to issue a countercyclical policy to provide a stimulus to the national economy. This study aims to determine the impact of OJK Regulation No.48 of 2020 on credit quality and control of banking credit risk in Indonesia. The research method used is descriptive qualitative with a literature approach using secondary data. This OJK regulation regulates economic stimulus through credit restructuring and regulates the implementation of credit risk management in banks. The existence of this regulation can maintain the stability of banking performance by keeping the Non-Performing Loan (NPL) number below 5% and providing a reference for banks in risk management with a model that is relevant to economic conditions during the COVID-19 pandemic.

Keywords: Financial Services Authority (OJK), Risk Management, Credit Risk, OJK Regulation, OJK48/2020, Non-Performing Loan, Banking Covid19 Stimulus, Indonesia Banking Policy in Covid 19 Era

1. Introduction

The coronavirus (COVID-19) outbreak began to spread in early 2020 and an official case of COVID-19 was recorded in Indonesia in March 2020. Starting from the case in Wuhan, China in December 2019, until it was announced as a pandemic outbreak by the World Health Organization (WHO) in January 2020. Until now, the official cases of COVID-19 based on data from WHO have been 100,455,529 cases worldwide. This very rapid spread has caused many countries to experience difficulties and problems in various aspects such as aspects of life, culture, politics and also the country's economy.

In order to overcome this pandemic, many countries issued regulations for lockdown and social distancing (Nicola et al, 2020). In Indonesia, this regulation is officially stated through Government Regulation Number 21 of 2020 concerning Large-Scale Social Restrictions (PSBB) in the context of the Acceleration of Corona Virus Disease 2019 (COVID-19) Control, which was issued on March 31, 2020. The existence of this regulation has

had a significant impact directly to the country's economy. The Indonesian Minister of Finance, Sri Mulyani, said that the impact of the PSBB was very enormous on the country's economy and since the implementation of the PSBB, economic growth was minus 5.32% in the second quarter. The decline in the country's economic performance was due to the fact that all economic activities were stopped during the implementation of the PSBB, and some companies even made layoff decisions (PHK). This negative growth indicates a decline in performance in various sectors, one of which is the financial services sector (CNBC Indonesia, 2020).

The decline in the economic capacity of the community will have an impact on the weakness of the community's ability to pay credit obligations to banks. To maintain the stability of banking performance in Indonesia, the Financial Services Authority (OJK) issued a Financial Services Authority Regulation (POJK) No.11 / POJK.03 / 2020 concerning National Economic Stimulus as a Countercyclical Policy on the Impact of the Spread of Coronavirus Disease 2019. This regulation was issued in March 2020 and ends in March 2021, but because the COVID-19 pandemic has not subsided up to now, changes have been made to the previous regulation, namely POJK No.48 / POJK.03 / 2020 which extends the validity period of the countercyclical policy until 31 March 2022 and also add some regulations.

POJK No.48/2020 is expected to maintain the credit quality of each bank by making a credit relaxation policy for debtors affected by COVID-19, with provisions adjusted by each bank as long as the bank continues to comply with the principle of prudence. In addition, in POJK No.48/2020 there are also additional regulations, one of which is the implementation of risk management tailored to the conditions of the COVID-19 pandemic. This pandemic condition will have an impact on credit quality and control of bank credit risk due to changes in economic movements experienced by the community. The implementation of risk management is very important for banks, especially in times of crisis such as this pandemic (Koulouridi et al, 2020).

Another thing that needs to be considered by banks and the government during this pandemic is credit risk management. According to the EY/IFF survey (2019) on global risk management, credit risk is the second most important priority to pay attention to. The crisis caused by the COVID-19 pandemic poses new challenges for risk modeling. The challenge that arises is the mismatch of the risk model that has been used so far with the economic conditions during this pandemic which has worsened the supply and demand of economic activity massively, then the lockdown and social distancing / PSBB policies have caused the unemployment rate to increase, thus affecting the financial capacity of the community. Therefore, POJK No.48 / 2020 is expected to be a direction for banks in implementing risk management during the COVID-19 pandemic.

Previous research related to this research topic is research by Disemadi & Shaleh (2020) on a legal review of credit risk management in an effort to prevent credit risk in Indonesian banks during the COVID-19 pandemic; research by Cakranegara (2020) concerning the comparison of the impact of the COVID-19 pandemic and the 1998 monetary crisis on Indonesian banking; and research by Albanjari & Kurniawan (2020) regarding the implementation of POJK policy no.11 / 2020 on Islamic Banks in Indonesia. This research is different from previous research, although it used the topic of the COVID-19 pandemic, but the discussion focused more on the influence of policies issued by the OJK in an effort to maintain the quality of Indonesian banking credit and its impact on credit risk management.

2. Literature Review

2.1. Financial Services Authority Regulation (POJK) No.48 / POJK.03 / 2020

POJK No.48 / 2020 is an amendment to POJK No.11 / 2020, regarding National Economic Stimulus as a Countercyclical Policy Impact of Coronavirus Disease 2019 Spread. The reason to issue this regulation is the rapid spread of COVID-19 in Indonesia which has direct and indirect impacts on the performance and capacity of debtors, so that it has a great potential to disrupt banking performance and financial stability which could negatively affect the country's economic growth. Therefore, to encourage optimization of the banking intermediation function, maintain financial system stability and support economic growth, an economic stimulus policy is needed as a countercyclical impact on the spread of COVID-19. Countercyclical policy is a government

strategy to fight the trend of economic booms or economic recessions through fiscal measures. This is done in order to keep the economy stable.

POJK No.11 / 2020 applies to Conventional Commercial Banks, Sharia Commercial Banks, Sharia Business Units, Rural Banks and Sharia Rural Banks. The main points of this POJK regulation include: banks can implement stimulus policies while still paying attention to the principle of prudence and debtors who are directly or indirectly affected by the spread of COVID-19 can accept the stimulus policies provided by each bank. The stimulus policy covers credit/financing quality assessment based solely on the accuracy of principal and/or interest payments for credit/financing up to Rp.10 billion, determination of credit/financing quality to be smooth after restructuring, and separation of quality determination for other / other financing. Credit restructuring is carried out by reducing interest rates, extending the term, reducing principal arrears, reducing interest arrears, adding facilities, and / or converting credit to Temporary Equity Participation.

POJK No.48 / 2020 is an additional regulation that extends the validity period of the stimulus policy until March 31, 2022. Additional regulations in this POJK include the implementation of risk management, credit/financing restructuring, policies for banks as a result of the spread of COVID-19 and reporting for bank. According to the POJK, banks are required to implement risk management which includes guidelines for determining debtors who are affected by COVID-19, assessing debtors who can accept restructuring, forming reserves for debtors who are deemed unable to survive, considering capital resilience by taking into account additional reserves to anticipate potential decline in credit quality, and conducting periodic resilience tests of potential deterioration in restructured credit quality and its impact on bank liquidity and capital.

2.2. Coronavirus Disease (COVID-19)

COVID-19 is a contagious disease caused by a new type of coronavirus. This is a new virus and an unknown disease prior to the outbreak in Wuhan, China, in December 2019. COVID-19 stands for Corona Virus Disease-2019. The new corona virus or novel coronavirus (nCoV) is a type of new corona virus that causes a disease called COVID-19. The new corona virus is a new virus, but it is similar to the virus family that causes SARS (Severe Acute Respiratory Syndrome) and a number of common colds (Task Force for Handling COVID-19, 2020).

The most common symptoms of COVID-19 are fever, dry cough and feeling tired. Other symptoms that some patients may experience less often include aches and pains, nasal congestion, headache, conjunctivitis, sore throat, diarrhea, loss of taste or smell, rash on the skin, or discoloration of fingers or toes. The symptoms experienced are usually mild and appear gradually. Some people become infected but have only mild symptoms. People can catch COVID-19 from other people who are infected with the virus. COVID-19 can be spread primarily from person to person through droplets from the nose or mouth that come out when an infected person coughs, sneezes or talks. These splashes are relatively heavy, they do not travel far and fall to the ground quickly. People can become infected with COVID-19 if they inhale the splashes of an infected person (WHO, 2020).

2.3. Credit Quality

Credit quality is a description of the condition of the debtor's loan principal and interest payments. Credit quality will affect bank credit risk. This is because good credit quality means that the debtor pays the principal and interest on time (current credit), while poor credit quality means that the debtor pays the principal and interest on the loan beyond the specified time limit, in other words, the credit risk increases because there is a possibility that it may not be a collectible credit. The quality of debtor credit can be influenced by internal and external factors. External factors are in the form of macroeconomic conditions and business climate, while internal factors are in the form of credit analysis process proposed by prospective debtors, this will affect credit quality when the prospective debtor gives excessive mark-up figures thus increasing the risk of the possibility of missing bank credit (Oka et al, 2015).

According to Ismail (2010) there are two categories of credit, namely performing loans and non-performing loans. Performing loans or loans that are not problematic can be further classified into two categories, namely:

- Current credit, which is credit without arrears of principal and interest.
- Loans, with special mention, are loans that were initially smooth but began to have arrears. It belongs to this category if the arrears are up to 90 days.

Non-performing loans or non-performing loans are classified into three, namely:

- Sub-current loans, are loans that are in arrears of more than 90 days to 180 days.
- Doubtful loans are loans that are in arrears of more than 180 days to 270 days.
- Bad credit, which is credit in arrears for more than 270 days.

2.4. Credit Risk

According to Bank Indonesia circular letter No.13 / 24 / DPNP / 2011 concerning the Rating of Commercial Banks, credit risk or default risk is a risk that arises because of the failure of the debtor to fulfill his credit and interest obligations to the bank. Credit risk is the most significant risk in banking. The success of the bank business depends on accurate measurement and a high level of efficiency in managing credit risk (Gieseche, 2004). Credit risk is usually measured using the ratio of non-performing loans (NPL). NPL can be measured by dividing non-performing loans by total credit (Mosey et al, 2018). When the NPL ratio is small, it means that credit collectability is getting better. Conversely, if the NPL value is large, it means that credit collectability is getting worse, which indicates that bank credit risk is getting bigger. Based on Bank Indonesia Regulation No.17/11/PBI/2015, the maximum NPL ratio is 5% of total loans. If the bank's NPL ratio is below 5%, it means that the bank is able to process credit risk well.

Bank Indonesia requires a risk management structure for each bank to cover credit risk. In general, risk management is a series of processes that begin with the process of identifying, measuring, monitoring and controlling portfolio risks (Idroes, 2011).

3. Research Methodology

This study uses a qualitative descriptive method with a literature approach. Library research has the following characteristics: the researcher is dealing directly with text in the form of documents or numerical data, librarian data is "ready to use" because the sources are already available from the documents used, the data used is secondary data, and the literature is not limited by space and time (Zed, 2014).

The data used in this research is secondary data from research journals, books, documentation, articles and written archives that are relevant to the research material. The research data obtained will then be processed in steps: data reduction, data presentation and drawing conclusions (Zed, 2014).

4. Result and Discussion

4.1. COVID-19 in Indonesia

Coronavirus is a group of viruses that can cause disease in animals or humans. Several types of coronavirus are known to cause respiratory tract infections in humans ranging from cold to more serious coughs such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). COVID-19 is an infectious disease caused by a newly discovered type of coronavirus. This new virus and the disease it causes were first discovered during an outbreak in Wuhan, China, in December 2019. COVID-19 is now a pandemic that occurs in many countries around the world (WHO, 2020).

The latest data from the COVID-19 Handling Task Force website as of February 3, 2021 shows that there are 1,099,687 confirmed cases of COVID-19, with 896,530 cases recovered and 30,581 cases dead. The rapid spread of COVID-19 has weakened economic performance in many countries. All sectors of the economy are affected directly or indirectly. This is due to the existence of regulations and policies on large-scale social restrictions

(PSBB) or commonly known as lockdown. Even though the lockdown policy is useful for minimizing the number of spread of COVID-19, the negative impact will be experienced on the country's economy. A report from CNBC Indonesia stated that in the second quarter of 2020 the economy was contracted by minus 5.32%. According to data from the Ministry of Finance, the COVID-19 pandemic has caused an increase in the number of unemployment by 2.67 million people. So that as of November 2020, the total number of unemployment has reached 9.77 million people. This weak economic condition made public finances very sluggish. All of these things will have a direct impact on the performance of banks in Indonesia.

The COVID-19 pandemic is pressing the economy both in terms of demand and supply. The decline in demand and supply stems from problems with medical, businesses performance, and expectations. The following is data on the economic sector in Indonesia that has been affected by COVID-19:

Table 1: Economic Sector Affected by Covid-19

Impact Level	Affected Sector
High Impact (Turnover decreased > 30%)	<ul style="list-style-type: none"> • Tourism • Manufacture • Building materials, heavy equipment • Property and construction • Pharmacy
Medium Impact (Turnover decreased > 10-30%)	<ul style="list-style-type: none"> • Multifinance • Automotive • Shopping center • Livestock, fishery • Distribution • Commodities (plantations, mining)
Low Impact (Turnover decreased < 10%)	<ul style="list-style-type: none"> • Packaging • E-commerce • Power plants • Medical devices • Staple food • Distribution • Tobacco / cigarettes • IT / communication

Source: Economy Research, BCA, 2020

The significance of the impact of COVID-19 is generally reflected in the decline of national economic growth (in the form of pressure on the inflation rate, disruption to the supply chain due to reduced imports of raw materials from affected countries, potential balance of payments, decreased consumer confidence, increased unemployment, and low planting rates of foreign capital (OJK, 2020).

4.2. Impact of Pandemic on Credit Quality and Credit Risk

During this pandemic, the performance of banks was severely affected, especially in the credit or loan sector. With the weakening of the financial capacity of debtors, it will be increasingly difficult for debtors to meet their credit obligations and loan interest. So that it will directly reduce credit quality. Bank activities, especially credit, cannot be separated from the problem of non-performing loans (NPL). NPL is a reflection of the credit risk that exists in a bank. If the NPL level is higher, the quality of credit is low and there is a large credit risk for the bank. On the other hand, if the NPL level is low, the quality of bank credit is in a safe and healthy condition, which means low credit risk.

Data from the OJK in the Indonesian Banking Statistics shows that the NPL rate has increased from before the pandemic to the beginning of the pandemic. The data used were taken from October 2019 to June 2020, here are the data:

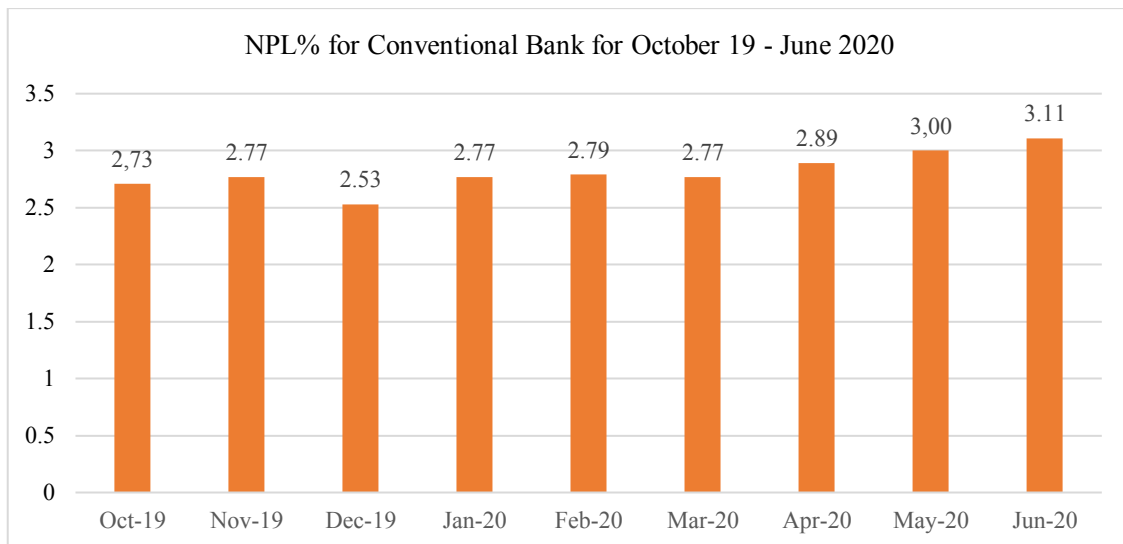


Figure 1: NPL% for Conventional Bank for October 19 - June 2020

Source: OJK Statistik Perbankan Indonesia, June 2020

Since COVID-19 entered Indonesia, the effects can be seen on the NPL of Indonesian banks. Indonesia first confirmed its COVID-19 case on March 2. It can be seen from the graph above that there is an increase in the NPL figure from March 2020 to the second quarter, June 2020. The increasing number of NPLs since the beginning of the pandemic has caused credit risk to increase.

4.3. Financial Services Authority Regulation (POJK) No.11 / 2020 and No.48 / 2020

This declining economic performance needs to be addressed with relevant policies and regulations from the government to maintain economic stability. Through the OJK, a regulation was issued to provide economic stimulus and reduce the negative impact of COVID-19, namely POJK No.11 / POJK.03 / 2020 concerning National Economic Stimulus as a Countercyclical Policy on the Impact of the Spread of Coronavirus Disease 2019. This OJK Regulation was issued on March 13, 2020 and is valid until March 31, 2020. The countercyclical policy is a pro-active policy from the government to overcome extreme economic conditions with the aim of maintaining the balance of the economic cycle (Disemadi & Shaleh, 2020). The fluctuations in economic activity that occur due to the spread of COVID-19 affect the performance and capacity of debtors, either directly or indirectly. When this happens, the next impact will be on the performance of banking activities and the unstable economic stability of the country, therefore an economic stimulus policy is needed to help the people's economic capacity. The issuance of this OJK regulation aims to enable banks to actively collect data on debtors who are affected by the spread of COVID-19, then the bank will implement the regulations specified in POJK No.11 / POJK.03 / 2020 to provide an assessment to debtors for eligibility for credit relaxation by means of credit restructuring. All this needs to be done by the bank, always accompanied by risk management, especially credit risk which is getting higher due to the weak economic capacity and capacity of the debtors. For the implementation of risk management in banks, it can be seen from the existing regulations, for Conventional Commercial Banks (BUK) using POJK No.18 / POJK.03 / 2016, Sharia Commercial Banks (BUS) and Sharia Business Units (UUS) POJK No. 65 / POJK.03 / 2016, Rural Bank (BPR) POJK No.13 / POJK.03 / 2015 and Sharia Rural Bank (BPRS) POJK No. 23 / POJK.03 / 2018.

The points of regulation in POJK Stimulus COVID-19 include:

- Asset quality determination policies, and
- Credit or financing restructuring policies.

In implementing economic development stimulus policies, banks must still pay attention to the implementation of risk management and must have guidelines for determining debtors who are affected by the spread of COVID-19 including for micro, small and medium enterprises (MSMEs). Based on POJK No.11 / POJK.03 / 2020, the classification of debtors who have received a credit relaxation policy is debtors who are affected by the

spread of COVID-19, making it difficult to fulfill credit obligations. According to OJK, the forms of credit relief/relaxation that can be provided by the bank are:

- Lower interest rates
- Extension of time period
- Reduction of principal arrears
- Reduction of interest arrears
- Additional credit / financing facilities
- Credit / financing conversion to Temporary Equity Participation

POJK No.48 / POJK.03 / 2020 is the POJK for changes to the POJK for the COVID-19 stimulus which took effect from 3 December 2020 and extends the validity period of the COVID-19 stimulus policy until 31 March 2022. The points of regulation in POJK No.48 / POJK.03 / 2020 are still the same regarding the credit relaxation policy for debtors who are directly or indirectly affected by COVID-19. In POJK No.48/2020 there are additional regulations to ensure the implementation of risk management and prudential principles for banks is implemented properly, as well as policies related to bank capital and liquidity. The additional regulations in this POJK cover the implementation of risk management, credit / financing restructuring, liquidity and capital policies for banks, and reporting policies.

In implementing policies that support the stimulus of economic growth, banks need to apply risk management. According to the OJK, at least the bank has guidelines for determining debtors who are affected by the spread of COVID-19, then conducts an assessment of the debtor data that is already held to assess the debtor's ability to withstand the impact of COVID-19, then the bank needs to create reserves for debtors who after being assessed it turns out that it is no longer able to survive after credit restructuring, then considers capital resilience by taking into account additional reserves to anticipate a potential decline in the quality of restructured credit in the event that a bank will distribute dividends and the last one conducts periodic endurance tests on the potential decline in credit quality and its impact on liquidity and bank capital.

Additional policies for credit restructuring include, for example, loans restructured due to the impact of COVID-19 being exempted from the calculation of low quality assets (KKR) in the assessment of bank solvency for BUK / BUS / UUS. Then the bank has the authority to adjust the credit restructuring approval mechanism as long as it adheres to the principle of prudence. Banks need to carry out an assessment of the capacity of debtors affected by COVID-19. This was done to further assess the impact on the credit quality assessment of the restructured credit.

4.4. Impact of POJK No.48 / 2020 on Credit Quality and Credit Risk

To see the impact of this POJK on credit quality and credit risk, researchers will use NPL data from the start of the COVID-19 pandemic until the latest data that can be obtained. For NPL data from before the pandemic to the second quarter (June 2020) can be seen in Figure 1. NPL% for Conventional Bank for October 19 - June 2020 above. Based on this graph, it can be seen that before the pandemic occurred until March 2020, the average NPL or non-performing loan figure was 2.72%. This figure is lower than the average NPL from March 2020 to November 2020. The following is the NPL data from the OJK Banking Statistics Indonesia:

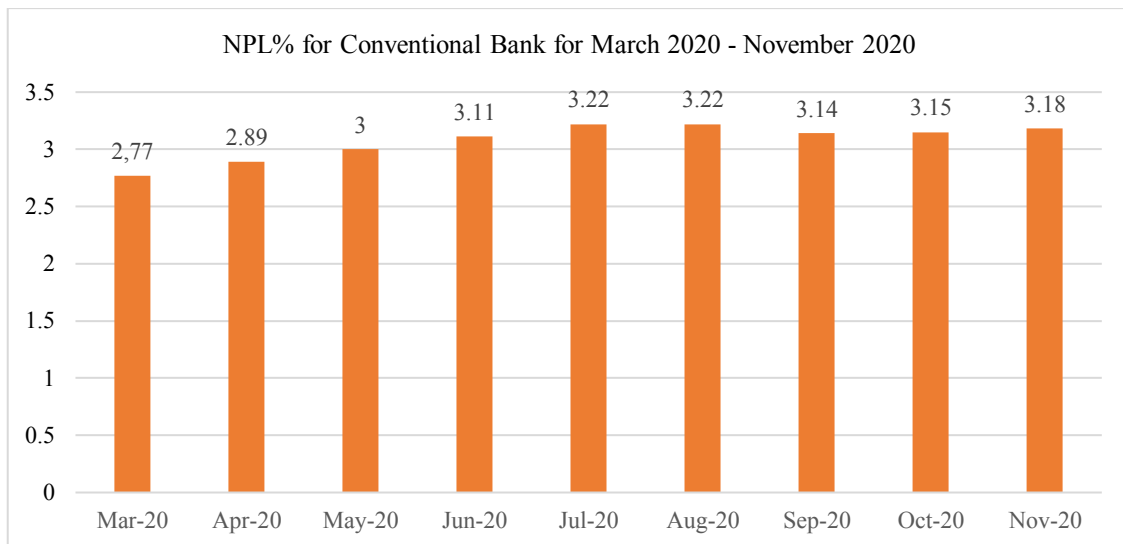


Figure 2: NPL% for Conventional Bank for March 20 - November 2020

Source: OJK Statistik Perbankan Indonesia, June 2020

Based on the data above, it can be seen that there has been an increase in the NPL figure from March 2020 (the first confirmed COVID-19 case) to November 2020. In March 2020 the NPL figure was 2.77% and continued to increase until July 2020. Furthermore, in August the NPL figure stable same as the previous month, and there was a slight decrease in September to October with NPL figures of 3.14% and 3.15%, and there was a slight increase in November 2020 reaching 3.18%. This data shows that even though COVID-19 reduces the quality of bank credit and increases credit risk, after the implementation of POJK No.11 / 2020 and No.48 / 2020 the number of non-performing loans / NPLs in banks can be kept more stable (still below 5%) with the issuance of a credit relaxation policy. The Chairman of the Board of Commissioners, Wimboh Santoso, said that this credit restructuring policy plays a very big role in reducing the NPL level of the bank because the restructured credit is directly categorized as smooth, therefore that banks do not need to make backups (Kontan.co, id, 2020). According to data from OJK, bank credit restructuring has reached Rp. 971.1 trillion on January 4, 2021. The amount of credit restructuring was received by 7.56 million debtors from 101 banks, of which the majority that received credit restructuring were Micro, Small and Medium Enterprises (MSMEs) of 5.81 million and the rest were non-MSMEs. as many as 1.76 million debtors.

4.5. Challenges and Importance of Risk Management in a Pandemic Period

The COVID-19 pandemic is causing extreme changes to the economic cycle. The previous discussion has shown a negative impact that can be seen from the increase in the number of NPLs in banks in Indonesia, whose numbers are starting to become more stable due to the assistance of policies from POJK No.48/POJK.03/2020. Another issue that needs attention is the implementation of credit risk management by banks. With economic conditions that are very unpredictable due to the COVID-19 pandemic, the credit risk model that has been used is less relevant. According to Guerreri (2020), most credit risk models are made based on historical data from the last decade, which is less relevant and does not describe the economic conditions during the COVID-19 pandemic which drastically changed the economy.

Risk management becomes more important than the pre-pandemic period. Maintaining business operations in this complex and fast-changing economic environment requires companies to be proactive in analyzing the company's future risks and preparing the steps needed to predict future risks (Culp, 2020). One focus of credit risk modeling is determining the baseline for macroeconomic projections. Economic conditions in a pandemic have caused shocks to the world with the lockdown policy which has a short or long term effect. Culp advises banks to be progressive or looking to the future by leveraging big data with the use of technologies such as machine learning and artificial intelligence (AI) to assist risk management in estimating risks quickly and efficiently. Banks also need to be active in seeking data from external sources to identify early signs of potential future risks.

Regarding banking risk management during a pandemic, it is included in OJK No.48 / 2020 and needs to be applied by banks to stimulate economic growth. This POJK regulation has the same basis as the previous explanation, which is progressive oriented or looking to the future and makes banks proactive in finding the data needed for risk assessment of debtors. The POJK regulates banks to record debtors who are directly or indirectly affected by COVID-19, so that an assessment can be made of the debtor's capacity to provide restructuring policies, the debtor is assessed whether he is able to survive the impact of COVID-19 or not, to enable the bank to predict the risk and overcome the credit risk of the debtor by establishing reserves, and it is also arranged to carry out periodic endurance tests against the decline in the quality of restructured credit and its impact on bank liquidity and capital.

5. Conclusion

The very fast spread of COVID-19 has weakened economies around the world, including in Indonesia. A weak economy also has an impact on the financial capacity of the community. This can directly increase the credit risk of debtors affected by COVID-19. The lower credit quality indicates an increase of credit risk. Credit risk can be seen from the number of non-performing loans (NPL). The existence of this pandemic has urged the government to issue regulations in order to stimulate the economy which is expected to overcome the problem of bank credit risk. These regulations are the Financial Services Authority Regulation (POJK) No.11 / POJK.03 / 2020 and additional regulations POJK No.48 / POJK.03 / 2020. This policy is countercyclical to overcome fluctuations in the economic cycle and is expected to mitigate the impact of the pandemic so that the financial capacity of the public or debtors is maintained to alleviate potential credit risks that may worsen banking performance. The stimulus provided under this policy is credit restructuring. After this policy, the bank's NPL figure was maintained at no more than 5%, which means that banking performance is still fairly good. Apart from that, this regulation also affects the control of bank credit risk, because with fluctuating and unpredictable economic conditions, banks are required to update their risk management models. POJK 48 / POJK.03 / 2020 regulates banking minimum standards for implementing risk management, which includes making guidelines for determining debtors who are affected by the pandemic, using debtor condition data to assess credit risk that can be caused, making reserves based on potential credit risks, and conduct periodic resilience tests on deterioration of restructured credit quality and its impact on bank liquidity and capital.

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Should Ghana Legalize the Commercial Use of Motor Bikes and Tricycles as Means of Public Transport? A Case Study of Five Selected Regions in Ghana

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Abstract

In the wave of raging debate, even on the floor of parliament, as to whether it would be expedient to commercialize Bikes' usage in Ghana, it is important to look at its benefits or otherwise. Hence, the study sought to show whether Ghana should legalize the commercial use of motor cycles and tricycles operations. The design was a descriptive study which used quantitative tool to show public acceptance or rejection of commercializing the use of motorcycles and tricycles in Ghana. The study was based on the use of questionnaires for the data collection and were analyzed using Microsoft Excel. The sample population considered was Five (5) Regions in Ghana which are Central, Greater Accra, Bono, Bono East and Northern Regions. Questionnaires of 460 were drawn for the study. It was found out, among others, that many of the riders do not possess licenses; riders are aware of robbery incidents perpetuated by their colleagues; police harassments and passenger pressure are strong reasons for not observing traffic regulations; unfavorable road architecture; the activity is a good source of income. It was therefore recommended that, the okada/pragia/keke/motor king/motor kia operations should be legalized for commercial use with regulations and strict compliance by actors or operators.

Keywords: Okada, Pragia, Keke, Motor King, Motor Kia, Motorcycles, Bikes, Tricycle

1. Introduction

A motorbike is variously defined as a small motorcycle with a low frame and small wheels and elevated handlebars in Oxford Dictionary which is echoed in Wikipedia as a human-powered (or gravity-powered) three-wheeler vehicle known as a motorcycle based on the same technology as a bicycle and powered by an electric

motor, motorcycle, scooter or car engine'. Some tricycles, such as cycle rickshaws (for passenger transport) and freight trikes, are used for commercial purposes, especially in the developing world, particularly Africa and Asia. A decline in organized public transport systems has led to rapid growth in non-conventional means of public transport, initially provided by minibuses and shared taxi/vans, and more recently by commercial motorcycles and tricycles.

Barnes (2005), defines transportation as the activity which primarily is concerned with providing an increasing human satisfaction through the changing of geographical location and the position of people and goods. Undoubtedly, transportation is considered a key factor in the socio-economic growth of all countries (Oduro, 2012; Healey and Ilbery, 1990). Agreeably, transportation is said to be efficient not only to facilitate spatial interaction and reduces the friction of distance, but also a precondition for effective economic, social and political development of a country (Keskinen, 2007; Healey and Ilbery, 1990). Transportation, irrespective of mode, serves as a conveyor belt for people to access goods and services and facilities across national boundaries. Hence, transportation cannot be detached from economic growth and therefore a strong bonding between the two (Rodrigue, 2017).

Agyemang and Panford (2006) posit that, economic growth of underdeveloped countries is a crucial factor for improvement of internal accessibility through the expansion of transportation networks that are important factors of economic growth. They were of the view that many social and political forces influence the process of transportation networks that are important factors for economic growth. Suffice its importance, there appears to be considerable setbacks in transportation network growth, especially, in developing countries due to high financial requirements for the sector's infrastructure commitments. This has led to the slow pace of economic growth in most countries in Africa, of which Ghana is no exception. Rodrigue (2017), posits that, transportation and the movements of people, goods and information have always been fundamental components of economies and the society in general.

The mobility requirement of an economy is the transportation systems that are evolving within a complex set of relationships between and among transport supply (Multi modal), reflecting the operational capacity of the road network and transport demand (Bardi et al., 2006; Rodrigue 2017). Economic growth has always been dependent on increasing the capacity and rationality of transportation. Because of the way in which contemporary cities and towns are planned and operated, there is usually a physical distinction between home and work, forcing people to move to work, to study and to leisure, and also to move temporarily for other activities. Business requires the transport of people to conduct (Bardi et al., 2006).

Accordingly, government recognizes the role transportation plays in Ghana in terms of economic growth and as a result has enacted an Act to regulate its activities (Agyemang and Panford 2006; Rodrigue 2017). A reliable and affordable road transport system plays a key role in the socioeconomic development of Ghana. Road transportation forms an important part of the socio-economic activities, facilitates the distribution of wealth through trade and employment opportunities in both urban and rural communities (Road Fund Act 536, 1997).

Considering the rapid growth of Ghana's population and urbanization, with the heavy vehicular traffics, bad road networks across the country and lack of many by-pass roads requires an alternative being motor bikes and tricycles services which is expected to take a center stage in the intra city and rural transport (Levy and Wong, 2010). Known by several names, the tricycle business is growing in popularity across Africa (especially in the low and lower middle-income countries) and Ghana in particular. Its many names on the continent include: Tuk-tuk (Eastern Africa - Kenya, Ethiopia, and Tanzania), Pousse-pousse (Madagascar), Keke and Okada (Nigeria), Raksha (Sudan), and Mahama Can Do and Nyaaba lorry in (Northern Ghana), Pragia, Okada and Aboboyaa in Southern Ghana (Levy and Wong, 2010).

In many developing countries such as Asia, motorcycles and tricycles are used as the main means of transportation, especially, among low-income urban dwellers and the poor (Dinye and Ahmed, 2015). The resort to motorcycles and tricycles as an alternative means of transport in solving urban mobility problems of towns in

Northern Ghana has introduced varying dimensions of issues and vices including traffic accidents and safety on the roads, registration, employment and robbery. Various researches have been conducted on the issues of motorcycle and tricycle traffic accidents, motorcycle and tricycle traffic management in motorcycle and tricycle dependent cities, and commercial motorcycle and tricycle operations among others (Banthia et al., 2006; Adesanya, 1998). In Kasoa in the Central Region, Accra in the Greater Accra, Techiman in the Bono East Region, Dormaa Ahenkro in the Bono Region and Tamale in the Northern Region, the motorcycle and tricycle transportation business (MTTB) is gradually taking over from the conventional Taxi Cabs as the main intra city commercial transport.

According to Bardi et al. (2006) and Rodrigue (2017), a growing share of wealth is linked to trade and distribution. As transportation has positive impacts on socioeconomic systems, there are also negative consequences such as fatalities during accidents, robbery attacks and mobility gaps. Recent years have also seen a growing recognition that certain segments of the society are disproportionately affected by transportation-related issues (Hanson and Giuliano, 2004). Developing transportation systems has been a continuous challenge to satisfy mobility needs, to support economic development and to participate in the global economy (Rodrigue, 2017).

Originally, Asia was known to be the continent which used motorcycles and tricycles as their major means of transportation. But in recent times, motorcycles and tricycles transportation have gained a solid root in African countries such as Kenya, Nigeria, Tanzania, Ethiopia and more recently Ghana. Although, the reality in Ghana suggests that commercialization of motorcycles and tricycles have come to stay, their operations are outlawed under Section 128(1) of the Road Traffic Regulations LI 2180, of 2012. Indeed, there is a growing concern whether to maintain the law and enforce it or to repeal it and promulgate a new law to legalize the commercial use of these motorbikes and tricycles. All these discussions are biased towards the proponents and opponents per their preconceived beliefs. The proponents believe that it will solve the gap in our transport sector in the urban and rural areas when and where motor vehicles/cars find it difficult if not impossible to ply at ease whilst the opponents posit that the accidents, disregard of road traffic signs and robberies are warnings enough to maintain and enforce the existing law. Since it is gradually showing that their operations have come to stay with its numerous benefits and, of course, the continuous reports of accidents, motorcycle related robberies and blatant disregard of motor traffic signs, it is imperative to seek the views of all those who matter in this sector of the socioeconomic setup to take a comprehensive decision on whether to repeal the law and promulgate a new law to legalize it for commercial purpose or maintain and enforce the existing law.

2. Review of related works

2.1 Concept of transportation

Transportation primarily involves the movement of goods and people. Since it is an activity which enables a person or a company to provide service to another person or company, it stands to reason that there must be rules of engagement or an understanding as to what sort of relationship should relate and govern the undertaking. Transportation creates, opens access to education, social facilities, health, industry, business, and commerce (Yeboah, 2015). For example, various studies reveal that public transport is more heavily influenced by the number of jobs in the city's downtown area than by almost any other factor (Barnes, 2005). The demand for travel takes place in a multidimensional setting. More recently, researchers have paid greater attention to other dimensions of choice, such as residential and job location, household automobile ownership, the time of day at which trips are taken, parking locations, and the duration of activities for which travel is undertaken, hence the introduction of the motorcycle and tricycle, (Barnes, 2005). Again, travel is a derived demand, usually undertaken not for its own sake but rather to facilitate a spatially varied set of activities such as work, recreation, shopping, and home life (Small and Verhoef, 2007; Obateru, 2005).

2.2 Mode of transportation

Transportation modes are an essential component of transport systems since they are the means by which mobility is realized. Varieties of modes are grouped into three broad classes based on the medium of their activities: land, water, and air (Bardi et al., 2006; and Keskinen, 2007). Each mode has its own requirements and properties and is adapted to serve the specific demands of freight and passenger traffic (Delta Regional Authority Report (DRA), 2008). This gave rise to mark differences in the ways the modes are deployed and utilized in different parts of the world. At the same time, however, passenger and goods activities are becoming increasingly separated across most modes (Rodrigue, 2017).

According to Eddington (2006), the creation of the transportation network influences economic geography, such as the location of its economic activity. The transportation network influences the location of industry; they revolutionize passenger movement and are critical in the creation and growth of many urban areas. The subsequent development of the strategic road network plays a key role in the relocation of new, light industries, attracted by market access and new clusters. At an urban/metropolitan level, there is strong evidence that inaccessibility to particular areas can have major effects on the location and pattern of development. In the longer term, accessibility changes can influence the form and density of the urban area, including the balance between the use of different transport modes, (including walking and cycling for shorter trips and public transport for longer trips) (NZP, 2014).

2.3 Theories of transportation and development

2.3.1 Transportation and economic development theory

This theory was proposed by Rodrigue and Notteboom (2017). According to the theory, development is related to the welfare of a society through appropriate social, political and economic conditions. The expected outcomes are quantitative and qualitative improvements in human capital (e.g. income and education levels) as well as physical capital such as infrastructures, (utilities, transport, telecommunications). While in the previous decades, development policies and strategies tended to focus on physical capital, recent years have seen a better balance by including human capital issues (Lau1996). Irrespective of the relative importance of physical versus human capital, development cannot occur without both. As infrastructures cannot remain effective without proper operations and maintenance while economic activities cannot take place without an infrastructure base (Rodrigue and Notteboom, 2017).

This is even more so in an economy where economic opportunities have been increasingly related to the mobility of people, goods and information, (Lau 1996). A link between the quantity and quality of transport infrastructure and the level of economic development is apparent. High density transport infrastructure and highly connected networks are commonly associated with economic growth (Lau 1996). The writers argued that when transport systems are efficient, they provide economic and social opportunities and benefits that result in positive multipliers effects such as better accessibility to markets, employment and additional investments. When transport systems are deficient in terms of capacity or reliability, they can have an economic cost such as reduced or missed opportunities and lower quality of life. At the aggregate level, efficient transportation reduces costs in many economic sectors, while inefficient transportation increases these costs. In addition, the impacts of transportation are not always intended and can have unforeseen consequences. For instance, congestion is often an unintended consequence in the provision of free or low-cost transport infrastructure to the users (Lau, 1996).

Transportation provides market accessibility by linking producers and consumers so that transactions can take place. A common fallacy in assessing the importance and impact of transportation on the economy is to focus only on transportation costs, which tend to be relatively low (Banister and Berechman, 2000). Transportation is an economic factor of production of goods and services, implying that it is fundamental in their generation, even if it accounts for a small share of input costs. This implies that irrespective of the cost, an activity cannot take place without the transportation factor. Thus, relatively small changes in transport cost, capacity and performance can have great impacts on dependent economic activities. An efficient transport system with modern infrastructures facilitate many economic changes, most of them being positive. Transport also

contributes to economic development through job creation and its derived economic activities. Producers and consumers take economic decisions on products, markets, costs, location and prices which are themselves based on transport services, their availability, costs, capacity, and reliability (Banister and Berechman, 2000).

2.4 Ghana Transportation system

In lieu of the contribution of transportation in the socio-economic growth of Ghana, the government has since formed a Ministry to craft policies that will make possible provision to various centers including market, health facilities and others to enhance regional integration, cooperation and good governance (Ministry of Transport Annual Report, 2017).

Accordingly, Bus transportation is the primary mode of public transport in almost every major city of Africa. Bus transport infrastructure is the modest, comprising mostly central terminals, bus stops, and in a few cases special bus lanes and streets (African Public Transport Association, 2010). The types of motor vehicles in urban areas comprise private cars, buses, trucks, motorcycle and tricycle and intermediate forms of transport such as bicycles (African Public Transport Association, 2010).

It is estimated that majority of the mini buses and other buses used in Ghana are second-hand. These second-hand buses are generally old aged, expensive to run and consume much fuel and need more repairs and are the cause of numerous road accidents in Ghana (Adams, 2004; Bonsu, 2015) The used-old-aged and poorly maintained vehicles produce deadly emissions and are environmentally unsuitable (Gillen, 1996). Arguably, the introduction of motorcycle and tricycle transportation system has contributed to the reduction in road accidents in Ghana especially in Kasoa, Accra and Techiman partly because people prefer patronizing the MTTB than the traditional method 'trotro' (GNA, 2017).

2.5 Motorcycle and Tricycle transportation system in Africa

The motorcycle and tricycle transportation system are one of the vehicles of road transportation system which has recently taken a space in the transport system especially in Asia and Africa. A motorcycle often called bike, motorbike or cycle is a human-powered (or gravity-powered) two-wheeled motor vehicle. Motorcycle design varies to suit a range of different purposes: long-distance travel, commuting, sporting including racing and off-road riding. There are major types of motorcycles: street, off-road and dual purpose. Within these types, there are many sub-types of motorcycles for different purposes. Commercial motorbikes are popularly called 'Okada' in Kasoa, Techiman and Accra. A tricycle, often abbreviated to trike, is a human-powered (or gravity-powered) three-wheeled vehicle. Some tricycles, such as cycle rickshaws (for passenger transport) and freight trikes, are used for commercial purposes, especially in the developing world, particularly Africa and Asia (Quellin, 2011). In the West, tricycles are used primarily for recreation, shopping, and exercise. Tricycles are favored by children and senior adults alike for their apparent stability versus a bicycle; however, a conventional trike has poor dynamic lateral stability, and the rider must take care when cornering to avoid tipping the trike over (Quellin, 2011).

Tricycles are taxi-like modes that rely on comparatively slow, lightweight vehicles that provide lower quality services than exclusive ride taxis, although at considerably cheaper fares. In contrast to large vehicle services, they generally complement rather than compete with formal buses, trotros and taxis (Cervero, 2000). Other attributes such as entrepreneurialism, small or ageing vehicles usage for operation, low-performance service and high level of competition typical of public transit modes are also peculiar to tricycle (Cervero, 2000). The tricycles are used for garbage collection, and are produced in the workshop (Reinders, 2016). There are two main types of tricycles in Ghana which are used for commercial purposes. They are the cycle rickshaws (passenger tricycle) "Pragia" as popularly known in Techiman part of Ghana and freight tricycle which is also popularly called as "Motor Kia or Aboboyaa" (Motor King) in Ghana.

2.5.1 Mode of motorcycle and tricycle transportation in Ghana

According to Wikipedia, motorcycles are of different modes which are street, off-road and dual purpose. They are suitable for two or three passengers at most with the rider inclusive. The riders are required to protect themselves with helmets and jackets, and other passengers are to be issued helmets. The motorcycles are vehicles with powerful diesel engines, and fuel tank capacity of 10 to 15 litres to cover about 200kms. According to Guillen and Ishida (2003), tricycles are of different modes. In Africa, Ghana to be specific, there are two main modes of tricycle, which are the passenger and freight tricycle (Njoh, 2007). The tricycles are vehicles with powerful diesel engines, and fuel tank capacity of 10.5 litres.

According to Green, (2011) many freight trikes are of the tadpole configuration, with the cargo box, (platform and many others) mounted on the front wheels. Freight trikes are designed for indoor use in large warehouses or industrial plants. Common uses include; delivery services in dense urban environments, food vending in high foot traffic areas (including specialist ice cream bikes) (Guillen and Ishida, 2003) and this is really common in Kasoa, Techiman, Dormaa Ahenkro, Tamale and Accra, where it is used for distributing bread and other food products. Its uses also include: recycling collections, warehouse inventory transportation and food collection.

2.6 Factors influencing commercialization of motorcycle and tricycle in developing economies

The motorcycle and tricycle transportation is widely used in South Asia and Southeast Asia, and Africa where it provides essential employment for recent immigrants from rural areas, generally poor men (Njoh, 2007). In the 1990s and first decade of the 21st century, rickshaws (tricycle) became increasingly popular in Africa, where they provide urban transportation, novelty rides, and serve as advertising media (Greene, 2011). Guillen and Ishida (2003) also added that motorcycle and passenger tricycle is used as a means of transportation to places like office, market, school, hospital, recreational centers and other activities which were performed by taxis.

The vehicles are suitable for intra-city commuting and commercial passenger carriage with low fuel consumption (Declan, 2012). Motorcycles and tricycles can be found in many developing countries and some developed countries. In certain parts of Egypt, motorcycles and tricycles are used to access long streets where the use of taxi would be uneconomical, but not necessarily in poorer areas as Bangladesh, Cambodia, Gaza, India and some parts of Africa (Declan, 2012).

The transportation system in any nation is determined by the socio-economic and political needs of the society (Ayodele, 2009). Whereas the rate of growth in the nations' social and economic sectors far exceeds the provision of transport infrastructure and services that the people demand. As such, available resources in the transport sector cannot cope with the increasing movement needs of the people (Ayodele, 2009). Since there is rapid increase in urban population with the inherent transport sector infrastructure deficit, obviously, there is the need for motorcycle and tricycle to be considered as a means of public and or commercial transportation modes in most developing countries (Ayodele, 2009).

In realization of the effect of motorcycle and tricycle transport to urban transportation, the Federal Road Safety Commission (FRSC) organized a day stakeholders forum for agencies and operators of motorcycles and tricycles in Nigeria (Ayodele, 2009) and the theme of the forum was "Ensuring Safe Operations of Motorcycles and Tricycles in Nigeria." In the forum, the corps Marshal and Chief Executive of the FRSC saw the tricycle as having been accepted by various state governments in the country as a means of poverty alleviation and the need to regulate its operations for improved safety on the roads (Declan, 2012). The authorities in the FRSC in Nigeria realized that the tricycle has become a household name playing a pivotal role in the urban transportation system of the country. They also realized that the tricycle transport ease transportation problems and create avenue for self-employment of the unemployed and the jobless as commercial tricycle scheme popularly known as Keke Napep (Ayodele, 2009). According to Bamedele (2016), increasing the growth of commercial tricycle transportation system could attribute to some intrinsic benefits such as door-to-door service, easy movement during traffic congestion, have the ability to travel on poor road networks, and other social benefits to the people. This therefore means that, most at times the theoretical aspect is been degenerated by transportation experts on the traffic relevance of the tricycle, especially as a commercial means of providing mobility. However, most related aspects of transportation and its benefits such as employment has led to the introduction of the motorcycle

and tricycle transport in most developing countries and it is fast extending to consider in almost all international issues (Bamedele, 2016).

2.7 Motorcycle and Tricycle transportation systems and Local Economic Development (LED) initiatives in Ghana

The economic base in the view of Helmsing (2001) and Schmitz (1995) refers to those activities which are used to change the conditions of individual in a locality through efficient (transportation). This economic base can be enhanced by the promotion of small to medium enterprises by having in place connected services such as transportation and freight (Helmsing, 2001). Microfinance, Small Loans Center and other Financial Institutions are some of the authorities in Ghana which provides productive activities in Kasoa, Techiman, Dormaa Ahenkro, Tamale and Accra. They introduced the motorcycles and tricycles to people in these localities to help reduce their poverty and unemployment (MASLOC, 2017).

Motorcycle and tricycle transportation system has been one of the basic transportation infrastructures which have been given much attention in Ghana due to the role it plays in LED (MASLOC, 2017). Čapkova (2005) in explaining LED initiatives listed a lengthy menu of possible local initiatives and classified them into five broad categories: financial tools; property-related tools; marketing; infrastructure development; and providing technical and information assistance. Dinye and Ahmed (2015) in their opinion also came out clear that motorcycle and tricycle transportation business is one of the initiatives in Ghana engaging the youth in employment, poverty reduction and other values. To add to the above, LED initiatives include: ensuring the functionality of local infrastructure in order to boost transporting goods and services. As a result, Hill and Nel (2004) are of the view that, the aim of any LED initiative is to increase the number of jobs available to the various communities through the creation or encouragement of enterprise and business activity (motorcycle and tricycle transport business). To achieve this, it is important that local entrepreneurial resources are mobilized so that the jobs created can be occupied by the local, poorer communities (Blakely, 1994). In fact, using motorcycle and tricycle transportation as a LED strategy is beneficial in considering the context of this study and as noted by Njoh (2007), motorcycles and tricycle transportation remains vital to growth and poverty reduction in Kasoa, Techiman, Tamale, Dormaa Ahenkro and Accra (Zuure and Yiboe 2017).

2.8 Challenges facing the motorcycle and tricycle transportation system

Transportation facilities are vital in an effort to reinforce a country's or a region's position within the global economic system. According to Njoh (2007), transportation cost constitutes one of the important determinants of the costs of doing business or an activity. Poor transport infrastructure in particular and poor communication facilities in general, tend to isolate countries, thereby preventing their ability to contribute in global production of transportation networks. Despite the global trend towards liberalization, the absence of efficient transportation systems, high transportation costs, promise to effectively limit the participation of African countries in the globalization process. There is still the need to effectively manage transport system very well. Small and Verhoef (2007), noted that transportation potentially affects the nature of the urban area itself. If transportations were costless, participants in an economy would have no economic reason to locate close to one another. The study of this influence is clearly germane to transportation policy. To analyze it fully requires the full power of disciplines such as urban geography, urban economics, and regional science, which seek to explain the shape of urban development. Motorcycles and tricycles as mean of mobility have become issues for urban transport planners, especially among developing countries since it is taking over the urban transport system. While it is a valid mode for transportation and accessibility, it is not originally intended for public transportation. In fact, issues raised against motorcycles and tricycles-based public transports are that of traffic congestion, decrease safety and worsening environment. It is generally noted that private vehicle ownership tends to have a strong relationship with the economic situation of cities (Guillen and Ishida, 2003). According to Ipingbemi and Adebayo (2016), some operators complain of the escalating price of registration and lack of time because several hours would have to be devoted to it due to high level of bureaucracy involved. It follows, therefore that some of the vehicles may not be road-worthy. The implication is that such vehicles are liable to frequent breakdown (with its attendant economic loss to both operators and passengers) and are vulnerable to road crashes.

Possession of driving license and year of driving experience are important components of road safety. Ipingbemi and Adebayo (2016) added that only few operators have driving licenses. Some of the operators may not have gone through the required process of obtaining a license. Similarly, the fact that most of them do not possess a valid drivers' license implies that they may have learnt the art of driving through a friend or acquaintances. Studies have shown a positive relationship between possession of valid driver's license and traffic safety. Also, these motorcycle and tricycle operators are mostly underage since there are no rigorous regulations checking on them and they also cause road accidents (McKnight and Peck, 2003).

Extortion from law enforcement agents is one of the most important challenges facing the motorcycle and tricycle operators (SSATP, 2014). Mostly these motorcycles and tricycles are not being provided with parking places because their activities are not yet legalized into transportation planning in the country. Therefore, they park haphazardly on the road shoulders, at junctions (blocking entrance) and on the carriageway. This is dangerous for the operators of motorcycles and tricycles and other road users. Poor Parking (particularly on-street parking) is a major problem created by public transport in developing countries (Aderamo, 2012).

2.9 The underlying theory and hypothesis

The concept of mobility has been variously interpreted, some inappropriately. In addition, the scale of application could have an important influence on the definition of mobility. For example, mobility at the metropolitan level might be defined differently than a mobility measure at the district or rural area, which itself might be very different from mobility as perceived by an individual traveler (NRC, 2002). Mobility is very relevant in transacting businesses and other economic growth activities. The effects of mobility could enhance or negatively affect in the performance of a business or a person's activities. According to Dinye and Ahmed (2015), motorcycle and tricycle transportation enhance individual's ability to move freely. They posit that, motorcycle and tricycle transport system contribute to economic growth of every economy which undertakes its operations with effective measures. Yeboah (2015) also agrees that tricycle transportation is one of the essential transport systems that contribute to the growth in the agricultural sector in most developing countries like Ghana. Increasingly, motorcycle and tricycle transport contribute a lot to mobility in areas where maneuvering of traditional four-wheeled transport is inaccessible making motorcycle and tricycle transport efficient and reliable (Dinye and Ahmed, 2015). According to Clarke (2003), commuting is a cost of economic growth. As cities become increasingly overpopulated, roads become clogged with increased numbers of private and public vehicles attempting to move large numbers of people. The end result is increased levels of wasted time spent commuting to and from work. The individual decision to commute to work in a private vehicle, rather than use public transport, is taken on grounds of convenience, comfort, and access. The demand for transportation within urban areas of developing countries, rise faster than the increase in income which is usually well in excess of unit, per capita incomes are rising more rapidly than in the advanced economies, and urbanization rates are rising more swiftly (Jolley, 2002). As a result, there is the need for legalization of the use of motorcycle and tricycle transportation business in Ghana. Indeed, this subject matter was debated at teeth on the floor of parliament of Ghana on 27th March, 2019 and reported by [Today Newspaper \(todaygh.com\)](http://todaygh.com) on 28th March, 2019 between Minority Chief Whip who doubles as Member of Parliament (MP) for Asawase Constituency in the Ashanti Region, in the person of Hon. Alhaji Muntaka Mubarak Mohammed who asked for the review of the existing law banning the commercial use of these bikes and First Deputy Speaker of Parliament also doubles as MP for Ashanti Bekwai, Hon. Joe Osei Owusu, who insisted that the safety concerns associated with the use of Okada and its excesses does not make it a viable mode of transport, hence the ban should be in place. Upon these revelations, it is important to empirically find out the viability or otherwise from operators, users and experts. This study therefore seeks to empirically test whether legalizing commercial operations of okada/keke/pragia/motorking, which have become accepted name for motorbikes and tricycles in Ghana, will help solve economic misfortunes of individuals, unemployment and various risks associated to bikes or not.

3. Methodology

The study seeks to show whether Ghana should legalize the commercial use of motor cycles and tricycles operations. The design is a descriptive study which uses quantitative tool to show public acceptance or rejection

of commercializing the use of motorcycles and tricycles in Ghana. The study is based on the use of questionnaires for the data collection. The Questionnaires are administered to gather information on whether or not Ghana should adopt the use of motorbikes and tricycles for commercial purposes. The questionnaires are close-ended questions. The sample population considered for the research is Five (5) Regions in Ghana which are Central, Greater Accra, Bono, Bono East and Northern Regions. The target sample size of the study are towns and the cities in the five sampled regions including, Kasoa, Accra, Dormaa Ahenkro, Techiman and Tamale. Questionnaires of 460 are drawn for the study. The respondents are segmented into two groups comprising riders and owners of these bikes on one side and general public, i.e. those who patronize the services of the motor bikes/tricycles, officers from Driver and Vehicle Licensing Authority (DVLA), employees of some insurance companies, officers and men from Ghana Police Service and some health/medical practitioners. Non-probability sampling techniques are adopted. The data from the questionnaires are analyzed using Microsoft Excel, utilizing the Frequencies and Graphs.

4. Results and Discussion

This chapter presents the analysis and interpretation of the data gathered from the respondents on the field. The total questionnaires for the sample size were 460 representing 100% of which 444 representing 96.5% were responded. This implies that the researcher has enough data to make an appropriate representation of the targeted sample size to make a good inference.

4.1 Gender of Respondents

The study sought to understand the gender dynamics of those who patronize the services of the okada/pragia/keke business and the operators of same in Ghana. It is revealed in Fig 4.1.1

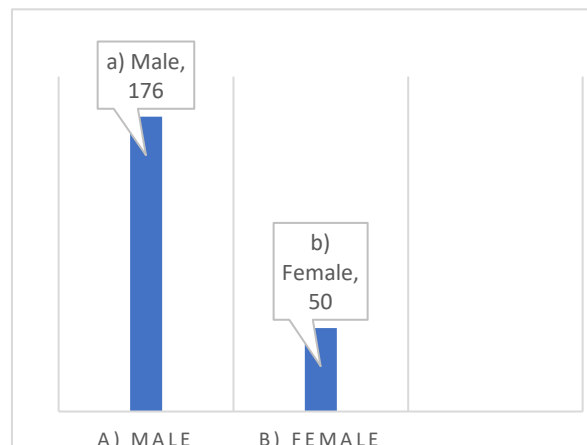


Figure 4.1.1: Gender for General Public

Source: Field Survey 2019

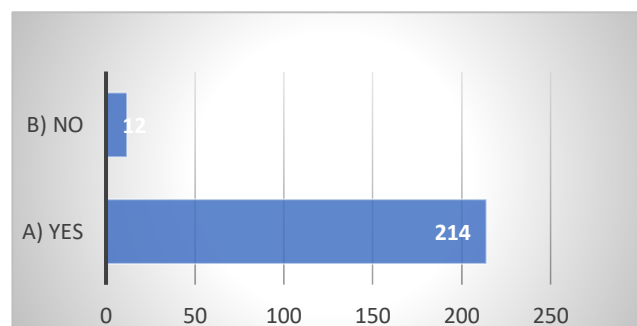


Figure 4.1.2: Have you ever joined or sat on or used a motor bike/tricycle?

Source: Field Survey 2019

Presenting the data, Fig 4.1.1 reveals that both genders are considered in the study to avoid bias in the data for this all-important national interest and reveals 77.9% males and 22.1% females, though, male dominated but do not discount involvement of female patronage.

4.2 Personal experience as a passenger

In Fig 4.1.2, it is revealed that, out of 226 respondents of the general public and professionals with the exception of owners/riders/owner-riders, only 12 of the respondents constituting 5.3% said that they have never patronized the services of these okada/keke. This is an indication that 94.7% have actually patronized these services which would give an informed picture of what the study seeks to establish.

4.3 Possession of valid riding license

In the event of trying to establish whether those who patronize these services know their right and are concerned of their protection, a further question was posed to the passengers if they have ever asked these riders/drivers whether they possess valid riding/driving licenses. Indeed, only 22.1% in Fig 4.1.3 indicates that they use to ask before patronizing their services. This really shows that many people are not interested in whoever rides/drives them to their destination. Their interests are not about their safety and could be a recipe to so many of the menaces and carnages caused by these bikes.

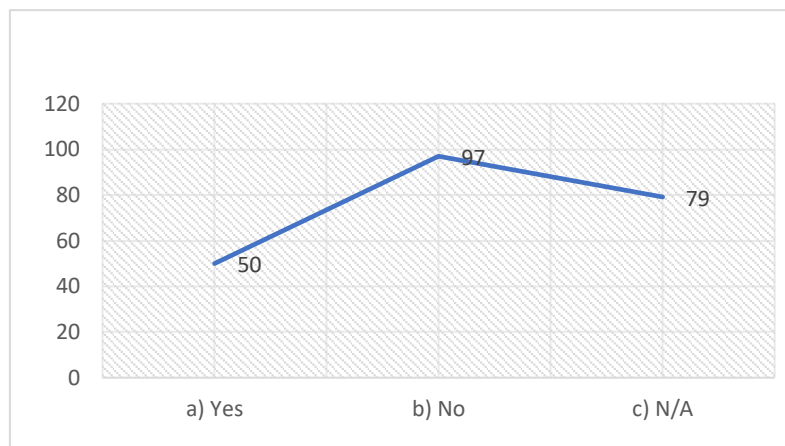


Figure 4.1.3: If yes, have you ever asked the riders whether they possess riding or driving license?

Source: Field Survey 2019

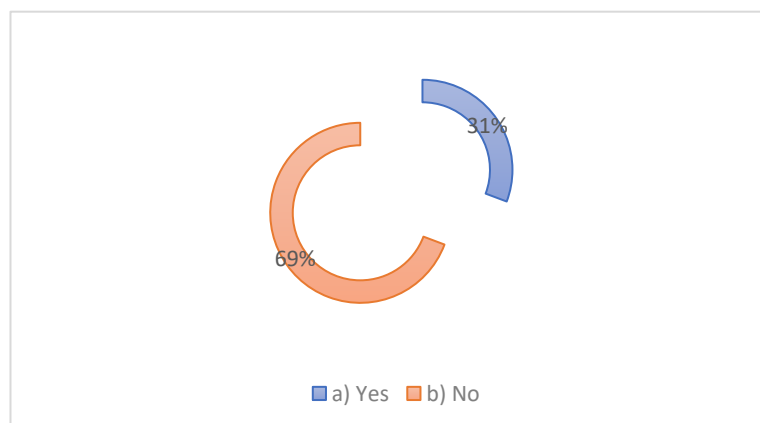


Figure 4.1.4: Do you possess a valid riding or driving license?

Source: Field Survey 2019

In fact, to further establish whether these riders/drivers possess valid licenses, Fig 4.2.4 analyzes the situation and shows that 69% of the riders/drivers of these motor bikes/okada/keke do not have or possess valid riding/driving licenses. Obviously with this revelation, the carnages caused by these riders/drivers are self-inflicted and avoidable accidents. Arguably, if these have well been structured and well-controlled, the rate of motor bikes accidents could reduce to the barest minimum.

4.4 Valid registration and insurance

The study continued its probe in the area of whether the okadas/kekes have valid Driver and Vehicle Licensing Authority (DVLA) registration numbers and valid commercial insurance cover. These are portrayed in Fig 4.2.3, Fig 4.2.5 and Fig 4.2.6.

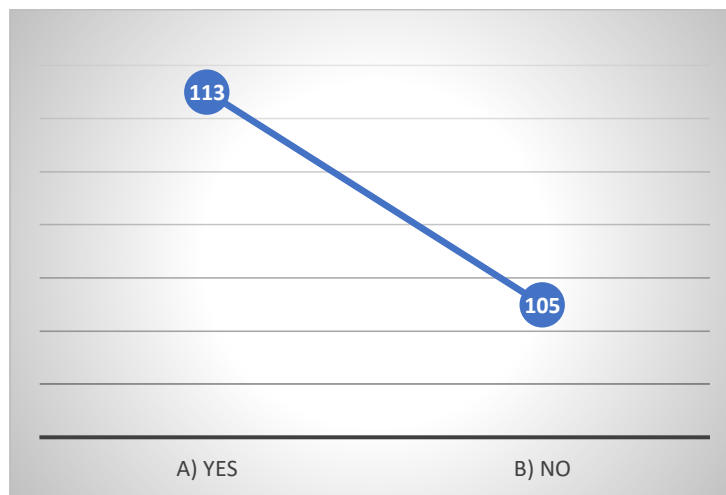


Figure 4.2.3: Does the Bike/Tricycle have valid registration from DVLA?

Source: Field Survey 2019

Although, 51.8% constituting 113 of the 218 of respondents have valid registration identification under the laws of the country, a whopping 48.2% do not possess valid registration which can have its own consequential effect which could lead to alleged robberies and or attacks said to have been perpetrated by these okada/keke riders after which their identification could be replaced with another invalid registration numbers.

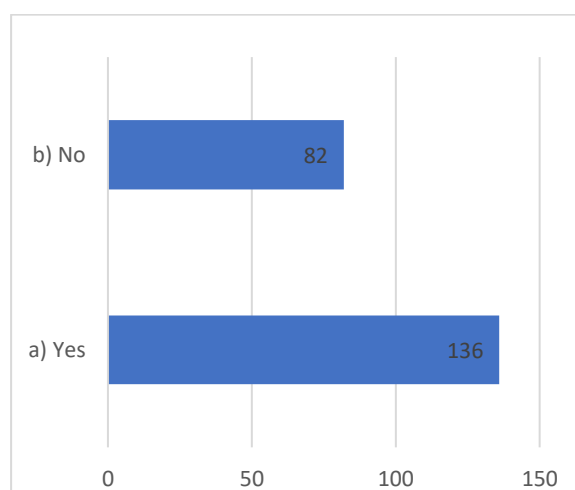


Figure 4.2.5: Is the Bike/Tricycle insured?

Source: Field Survey 2019

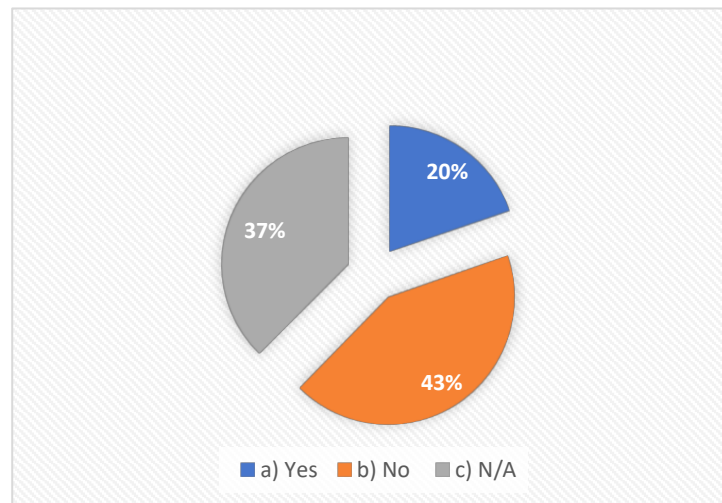


Figure 4.2.6: Does the insurance cover the passenger(s)?

Source: Field Survey 2019

One worrying situation about the use of okada/keke/pragia has been their involvement in accidents across the country. To ameliorate the suffering of affected persons involved in such accidents, not only with okada/keke/pragia but all transport modes, is commercial insurance cover for both the passengers and riders/drivers. It is as a result that the study sought to establish whether, indeed, these bikes have insurance and that the insurance covers their passengers. It was established in Fig 4.2.5 that 82 respondents representing 37.6% of the riders stated that their bikes do not have insurance and that of the 136 respondents representing 62.4% of the riders who claim to have insurance cover said that only 20% of their bikes have commercial insurance, covering their passengers as indicated in Fig 4.2.6. Indeed, these revelations are very worrisome and devastating to general public especially those who patronize the services of these operators due to the rampant reported accidents these Bikes/Kekes/Pragias are involved.

In trying to establish the many causes of Motorbikes related accidents, it is necessary to ascertain whether these many accidents are purely negligence or otherwise. It is as a result that the study intends to know the relationship between owners of the bikes and the Riders/Drivers. Fig 4.2.2 clearly indicate that majority being 140 respondents out of 218 are just employees whose aim is to make good sales for their owners while doing everything possible to get something daily for house chores or other unavoidable daily expenditure. In this instance, riders are usually hasty and particular about how much they are able to generate to take their responsibilities as enumerated earlier. Again, the study sought to find out whether it will be possible to do away with their commercial activities due to the numerous complaints of accidents. Fig 4.2.8 vividly shows how long they have been in operation.

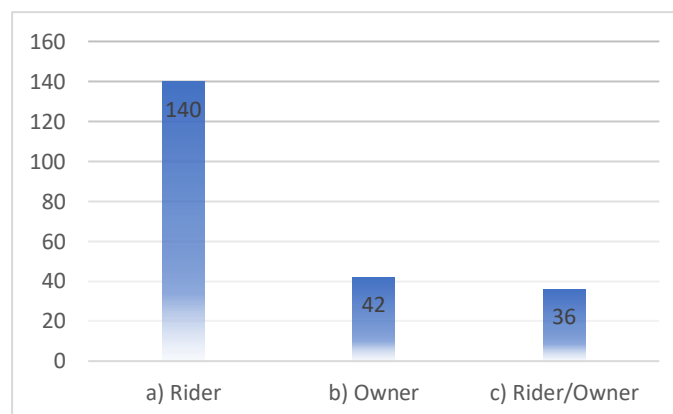


Figure 4.2.2: Are you the owner of the bike/tricycle?

Source: Field Survey 2019

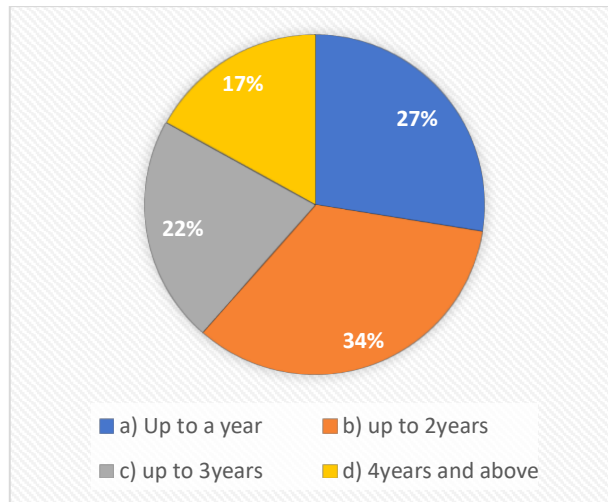


Figure 4.2.8: How long have you used a bike/tricycle for commercial purpose?
 Source: Field Survey 2019

The data in Fig 4.2.8 shows that they have operated illegally but vividly for a long time which in effect has become an unprinted legally acceptable norm. The data in Fig 4.2.8 clearly shows that the commercial usage of these bikes/pragia/okada is gradually gaining grounds over the years from 17% to 61% over the last two (2) years.

Although, insurance seem to cushion victims if they are covered in one way or the other, which the data in this case do not suggest or support same, there are measures to undertake to avoid serious injuries and or fatalities. One of such measures is wearing of crush helmet when using motor bike as a rider or passenger. Upon this knowledge, the study revealed in Fig 4.1.8 and Fig4.2.27 that 102 passengers say they are not given crush helmet whenever they are picked by these riders. This is confirmed by about 35 riders of these motor bikes in Fig 4.2.27. Although, both riders and passengers have concurred there are some level of usage of the crush helmet, it is still not the best practices so far since it is prerequisite to use without exception.

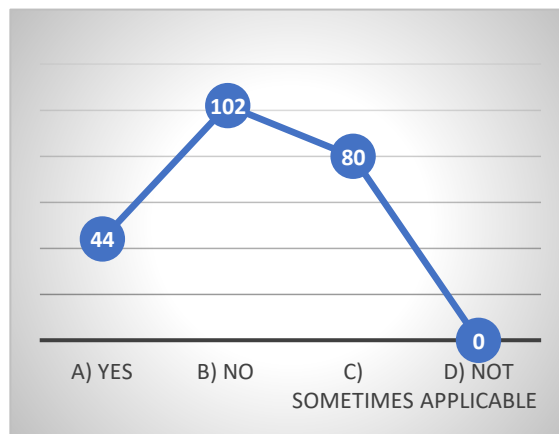


Figure 4.1.8: Do riders usually provide crush helmet for themselves and you?
 Source: Field Survey 2019

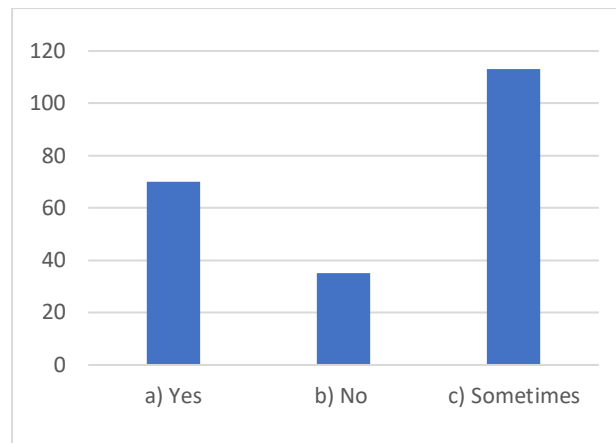


Figure 4.2.27: Do you provide Crash Helmet for yourself and your passenger(s)?

Source: Field Survey 2019

Since the study is interested in the safety of users of these bikes/okada/keke/pragia, it needed to find out what could be the causes of the rampant reported accidents. It is at that backdrop a data was collected on whether the riders observe motor traffic regulations which when not observed could be one of the recipes to accidents, i.e., crashes and or collisions.

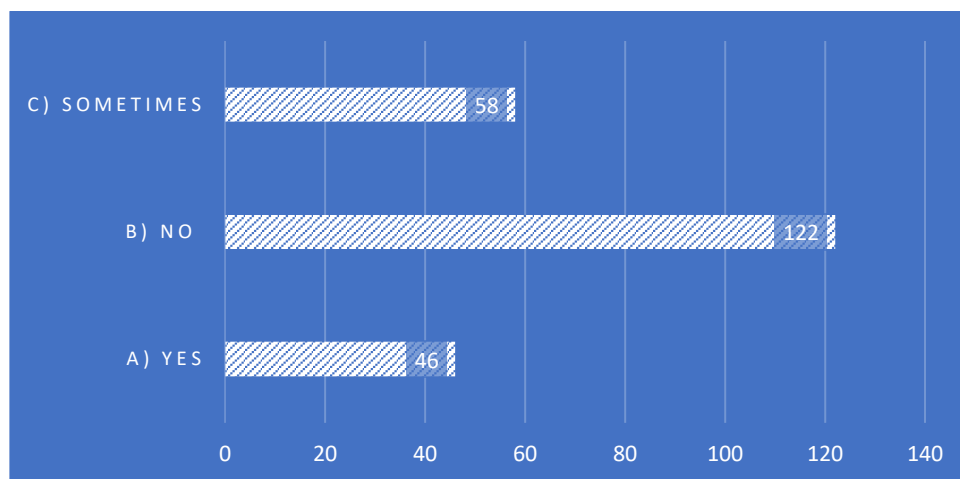


Figure 4.1.10: Do the riders observe motor traffic regulations?

Source: Field Survey 2019

In Fig 4.1.10, about 54% of passenger respondents insist that the riders do not observe road traffic regulations. Undoubtedly, accidents involving these bikes that have flooded the Ghanaian roads and streets are unavoidable with this kind of mentality and behaviour. Indeed, just a little over 20% disagree with the other passengers by defending the riders for adhering to the motor traffic regulations. Undoubtedly, many reported accidents of these bikes occur in traffic regulated areas, i.e., traffic light stops, intersections, road shoulders and roundabouts, as reported by various media houses as and when these accidents do occur.

Upon these revelations, the study intended to find out the reasoning behind the non-observance of the motor traffic regulations by some or many of the riders. It is depicted in Fig 4.2.11 that their actions depend on many factors.

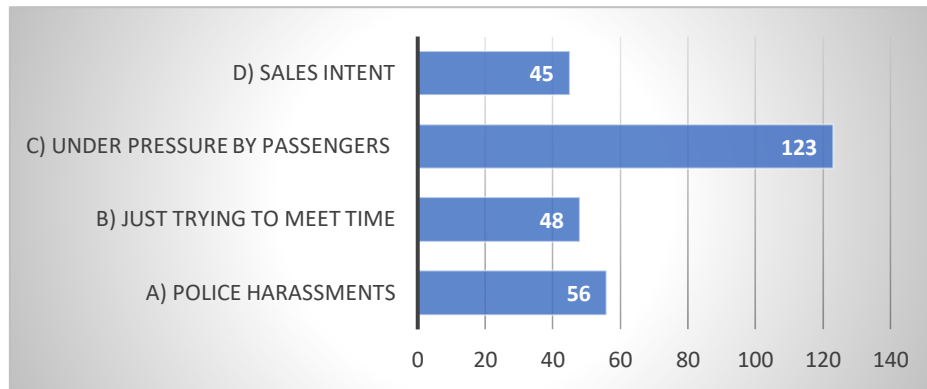


Figure 4.2.11: Some of you sometimes don't observe traffic regulations, why? You can choose more than one

Source: Field Survey 2019

Source: Field Survey 2019

In fact, the factors enumerated in Fig 4.2.11 are all significant as clearly shown by the data. However, the two most prominent amongst them are the Pressure from Passengers factor which constitute about 45% of the rider respondents and the Police Harassments which also constitute about 21% of same respondents. In any case, these should not be the reason to disregard guiding principles or rules in any profession, however, minimization of these factors could reduce if not eliminate various accidents caused as a result of failing to observe road traffic regulations.

In trying to authenticate the various reports of accidents involving these bikes, Fig 4.2.15 shows that 32% of rider respondents have themselves involved in accidents. Suffice it all is that, more than 75% of rider respondents have confirmed in Fig 4.2.17 of having witnessed or observed such accidents by other riders. Simply, this is an attestation of reported accidents which need urgent attention and solution.

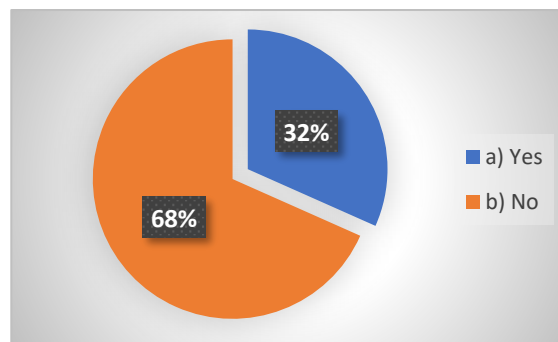


Figure 4.2.15: Have you had a Bike/Tricycle accident before?

Source: Field Survey 2019

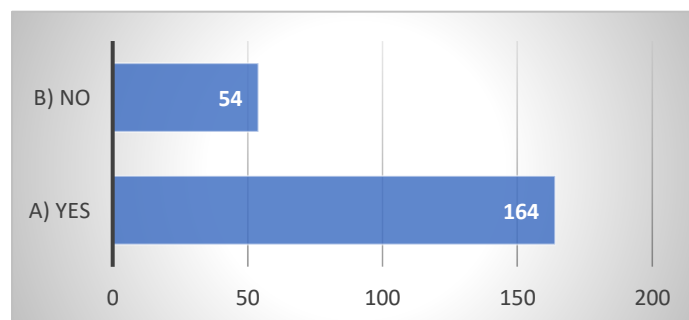


Figure 4.2.17: Have you seen or observed accidents of other riders before?

Source: Field Survey 2019

In addition to the risk of reported accidents as confirmed in Fig 4.2.15 and Fig 4.2.17, another serious risk which is also alleged to have been happening to passengers of these bikes especially, okada is the robberies that usually take place in obscure locations by some of the riders. Upon this widespread knowledge, the study intended to establish the truth or otherwise and why people still patronize the services of the okada. In spite of all the allegations of the robbery, 54% of passengers of these bikes, as depicted in Fig 4.1.5, have, surprisingly, indicated that they have nothing to fear. However, these responses are accepted because not many of them have been robbed by their riders as shown in Fig 4.1.6 where only 39 out of 226 respondents confirmed having been robbed by their riders. In any case, the 39 robberies cannot be swept under the carpet with the notion of not too many are involved. In fact, ideally, there should be zero tolerance for riders robbing their own passengers.

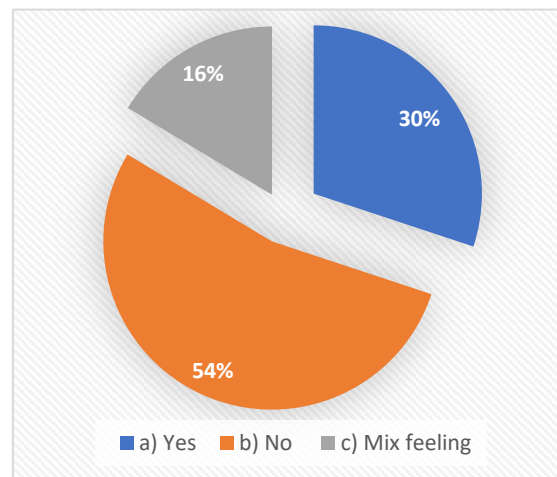


Figure 4.1.5: Whenever you pick these motor bikes/tricycles, do you entertain any fear of robbery?

Source: Field Survey 2019

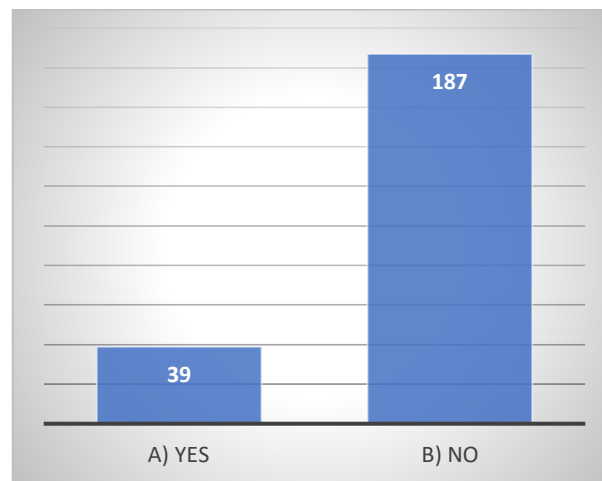


Figure 4.1.6: Have you ever been robbed by a rider?

Source: Field Survey 2019

In the event that many of the passengers have indicated that they do not entertain any fear of being robbed by their riders which is attributable to the low number of such incidences as depicted in Fig 4.1.6, the study probed further whether indeed the riders themselves are aware of such unacceptable behaviors of some of their colleagues. Fig 4.2.19 testifies that 56% of the riders are aware of the behaviors of some of their colleagues. It is instructive to note that, although the passenger respondents have indicated that not many have been robbed directly, 42% alleged to know people who have been robbed by their riders in Fig 4.1.7. With this knowledge, the questions begging for answers are: why are the other riders not reporting the bad nuts? Why are the passengers not perturbed and still patronizing?

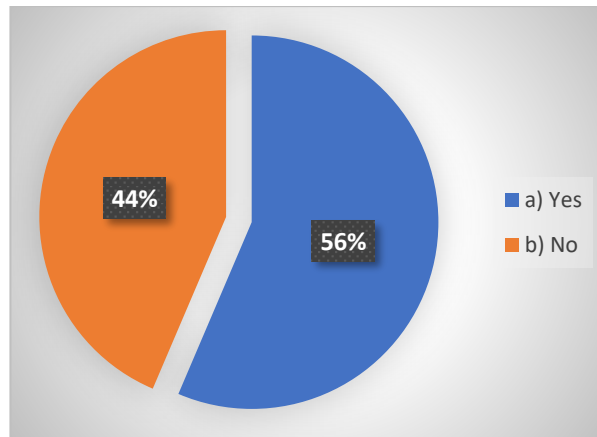


Figure 4.2.19: Are you aware some riders take passengers and rob them on their way?

Source: Field Survey 2019

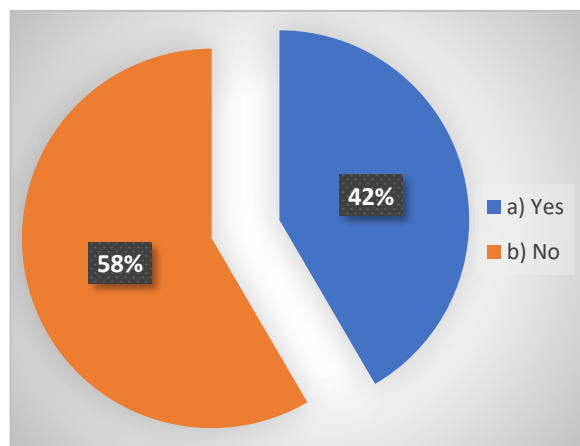


Figure 4.1.7: Do you know somebody who has ever been robbed by a rider?

Source: Field Survey 2019

Upon trying to find answers to the actions of the passengers, they were asked to give the motive(s) behind why they are not bothered with the robbery incidences that do occur using the services of these bikes. Fig 4.1.4 gives a myriad of reasons including the Low cost of their services representing 87 respondents which is the major reason, followed by Time constraint of 66 respondents which has got to do with trying to report to wherever the passenger is heading to on time and Road network accessibility having 54 respondents which indicates that there are not many by-passes or link roads for vehicular and traffic diversions. These and many others are reasons why people are not bothered to patronize the services of these bikes, even in such risky environments.

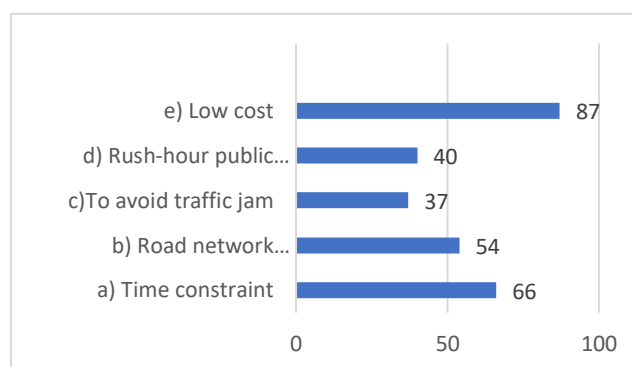


Figure 4.1.4: Why do you usually take Motor Bike/Tricycle? (Can choose more than one)

Source: Field Survey 2019

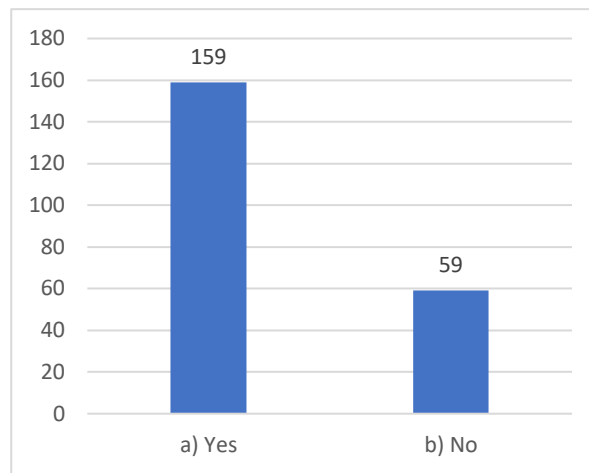


Figure 4.2.9: Have you been having problems with the Police?

Source: Field Survey 2019

It is recalled in Fig 4.2.11 that rider respondents mentioned of Police harassments as second highest reason why they usually do not observe traffic regulations. It is at the backdrop of this that the study seeks to know the kind of harassments meted out to them by the Police. Evidently, Fig 4.2.9 shows that about 74% of the riders are said to have had one form of a problem or other with the Police in performing their services.

Specifically, Fig 4.2.10 shows the problems these riders have had with the Police. These problems are Extortions, Prosecution and Arrest. Indeed, over 65% (142 Respondents) of these riders claim they have ever been arrested by the Police as portrayed in Fig 4.2.12.

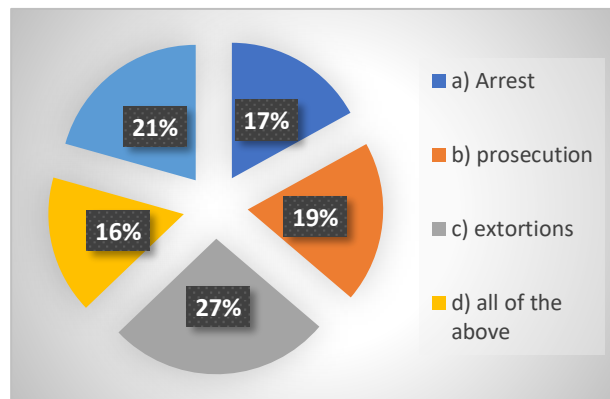


Figure 4.2.10: What are some of the problems you have with the police?

Source: Field Survey 2019

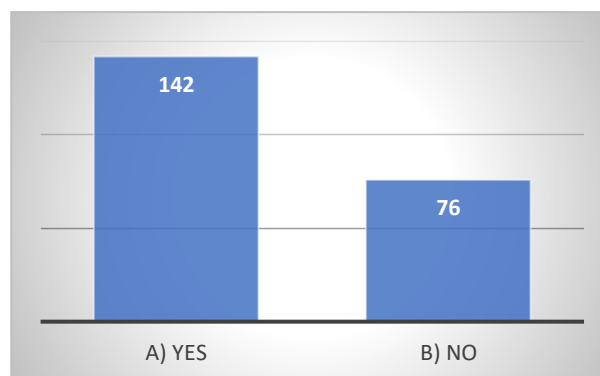


Figure 4.2.12: Have you ever been arrested by the Police because of using the Bike/Tricycle as commercial?

Source: Field Survey 2019

For the study to understand the predicaments of these riders in the hands of the Police that push the riders to endanger their lives and that of their passengers by not observing road traffic regulations leading to many horrific road accidents, it was proper to know how the riders are able to “sort” themselves out with the Police. It is recalled that many of these riders have said they do not possess riding license and commercial insurance cover. Fig 4.2.14 clearly shows that extortion is the order of the day as almost 60% of all arrest pay monies to the Police without receipts which is amplified in Fig 4.2.10 that indicate 27% being the highest problem the riders have with the police.

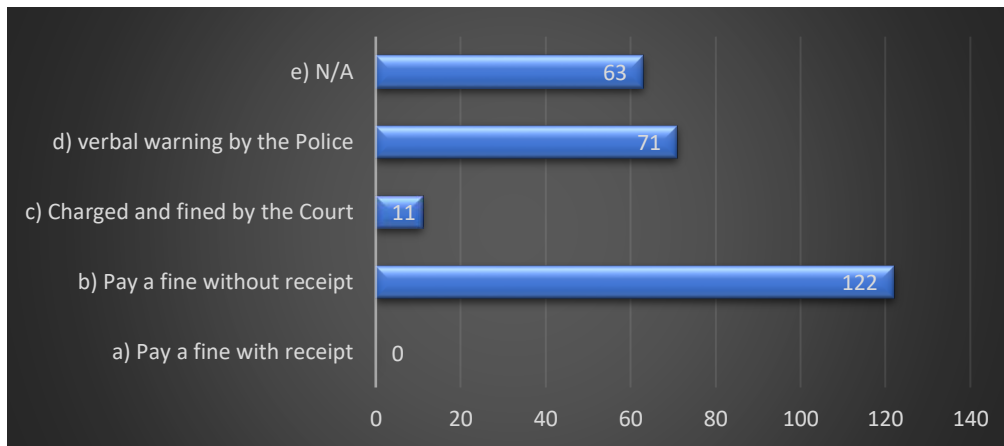


Figure 4.2.14: In all the arrest, how have you been sorting yourself with the Police? You can choose more than one

Source: Field Survey 2019

Indeed, the revelations so far indicate how risky and frustrating it is to operate the business or serving as a rider of illegal commercial okada/keke/pragia in Ghana. As a result, the study finds it important to know what has been the motivating factor. Essentially, financial motivation is said to be paramount in such a trade and that seeking to know how much they do/earn as sales per day, it is revealed in Fig 4.2.24 that they make between GH¢50 to over GH¢200. Indeed, 83.5% make GH¢50 per day as sales to the owner after taking away fuel and the rider’s daily housekeeping monies (chop money). Agreeably, these bikes are able to fetch their owners as much as approximately GH¢1,400 per month which is a good return for a bike and worth the risk and need attention in the accounting for economic activities in the country.

According to Fig 4.2.25, some riders are paid Daily, some Weekly and others Monthly. However, 60% of these riders are paid weekly and 29% are paid Daily which shows some form of job insecurity probably due to its illegal nature.

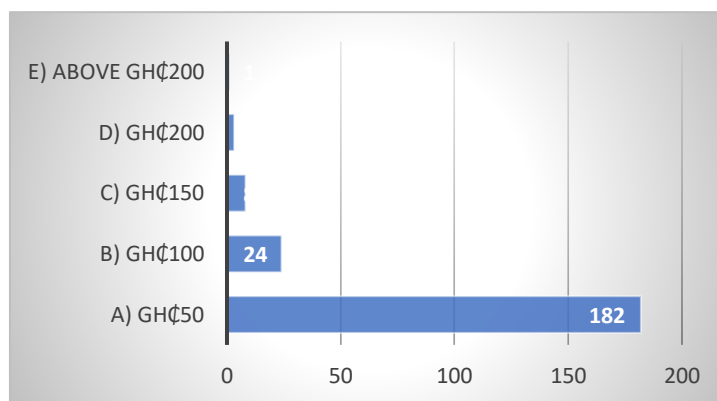


Figure 4.2.24: How much do you make as ‘Sales’ a day?

Source: Field Survey 2019

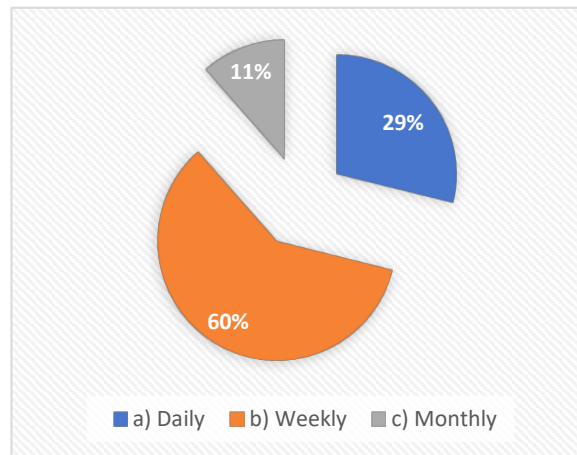


Figure 4.2.25: How have you been paid as a rider?
 Source: Field Survey 2019

Although, these riders are paid in different time frames, their monthly estimates based on when they are paid is enumerated in Fig 4.2.26. Approximately, they are paid between GH¢150 to over GH¢300 per month. In fact, 53% of the riders are paid between GH¢250 and GH¢300 as a monthly take home without considering any form of security and subsequent benefit.

Unsurprisingly, 96% of these riders and owners believe that the okada/keke/pragia business is a good employment opportunity for them as depicted in Fig 4.2.30.

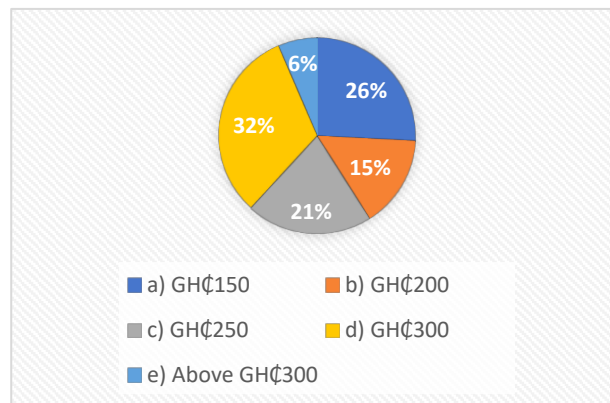


Figure 4.2.26: Approximately how much are you paid for a month?
 Source: Field Survey 2019

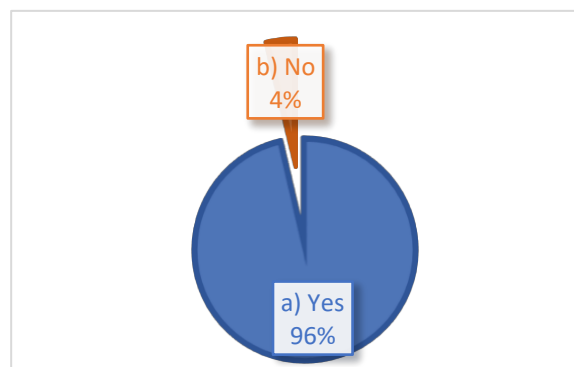


Figure 4.2.30: Do you think this is a good employment avenue for you?
 Source: Field Survey 2019

After identifying some or many of the problems confronting the riders/owners and the general public of the okada/keke/pragia business and the knowledge of an existing law L.I. 2180 (2012), which bans these bikes from commercial uses, it becomes imperative to quiz these groups whether, in spite of all the problems identified and the risks thereof, that business should be given the green light by the legislature. In Fig 4.1.11, about 81% of the general public respondents consisting of experts and passengers posit that government should make a U-Turn and legalize the use of Motor Bikes/Tricycle as commercial transport model. Their endorsement is echoed by the riders/owners in Fig 4.2.20 as all of them, a 100%, of that category of respondents insist the legalization for commercial purpose is the way to go.

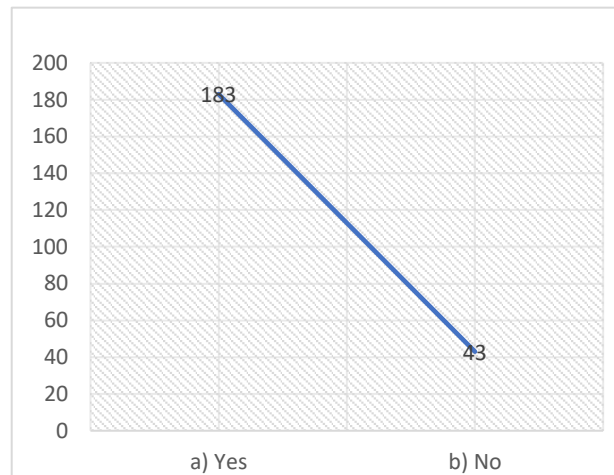


Figure 4.1.11: Do you think government should legalize the use of Motor Bikes/Tricycles for commercial purpose?

Source: Field Survey 2019

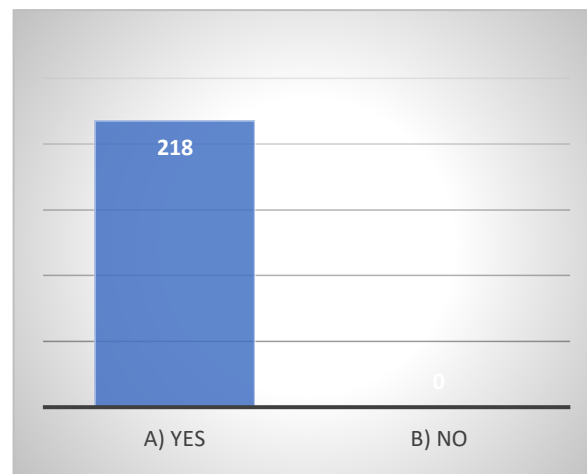


Figure 4.2.20: Do you think government should legalize the use of Motor Bikes/Tricycles for commercial purpose?

Source: Field Survey 2019

Having established their stand, it was proper to seek their understanding if the legalization will have any impact or influence on the general menace caused by these bikes. Responses in Fig 4.1.12 and Fig 4.2.21 show that legal backing will reduce the menace as about 80% of general public and 89% of these bike riders/owners affirm to the notion.

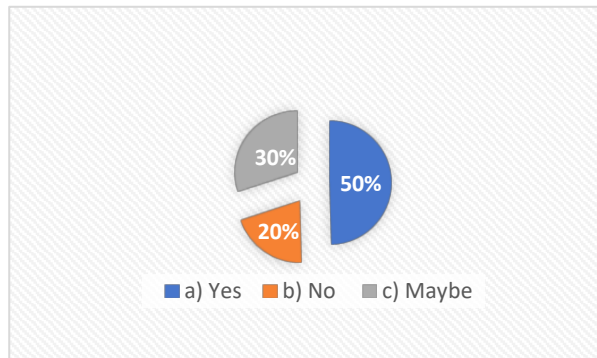


Figure 4.1.12: Will a legal backing reduce motor bikes/tricycles menace in general?
 Source: Field Survey 2019

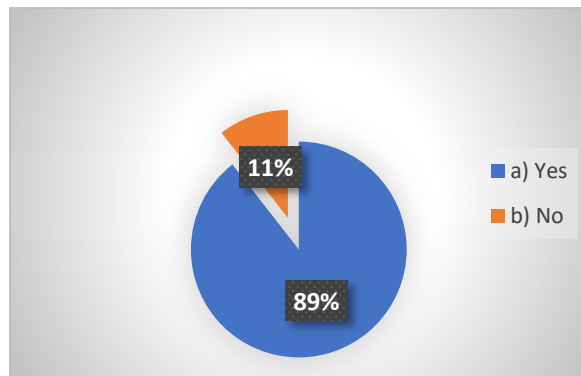


Figure 4.2.21: Will a legal backing reduce motor bikes/tricycles menace in general?
 Source: Field Survey 2019

Having established the fact that legal backing will help mitigate general menace of the bikes’ operations, the study seeks to know how that can reduce the menace. It is revealed in Fig 4.1.13 that, because of the legalization they will be regulated and so will see the need to observe road traffic regulations, culprits will easily be identified because of measures that would be put in place and the fear of sighting the police leading to disregarding traffic regulations will cease or minimize. Indeed, the responses in Fig 4.2.22 are not different from the responses from the general public. The riders/owners also argue that legal backing will help them observe road traffic regulations because the police fear factor which is amongst their banes of rushing leading to many reported accidents shall cease. They again opined that culprits will easily be identified due to measures that might be put in place.

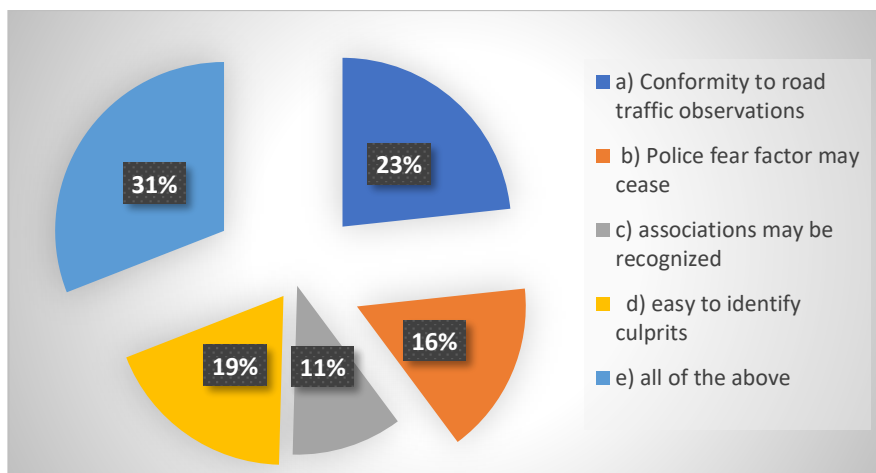


Figure 4.1.13: How will a legal backing for commercial use reduce motor bikes/tricycles menace?
 Source: Field Survey 2019

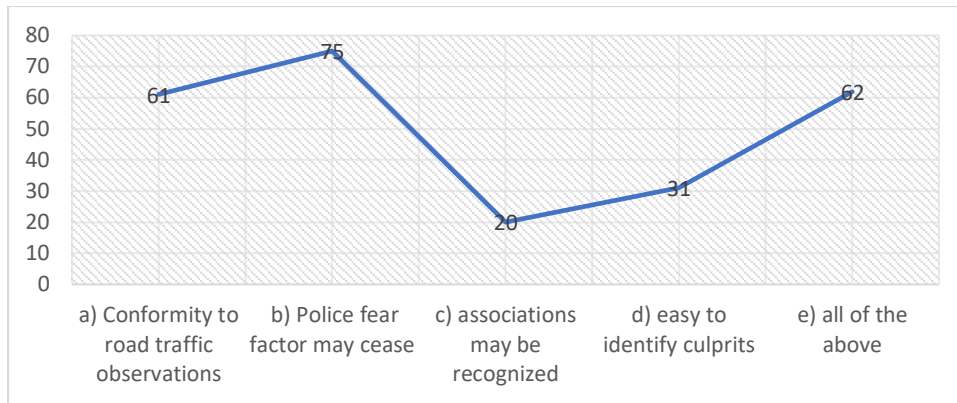


Figure 4.2.22: How will a legal backing for commercial use reduce motor bikes/tricycles menace? You can choose more than one
 Source: Field Survey 2019

To further deal with the menace, the study sought from the respondents what other things can be done to eliminate the vices associated with the bikes/tricycles when legalized for commercial purpose. Majority of the general public respondents in Fig 4.1.14 insist on formation of associations as a checker and identifying the bikes/tricycles with embossment identification numbers from MMDAs for easy identification from even afar which is also confirmed in Fig 4.2.23.

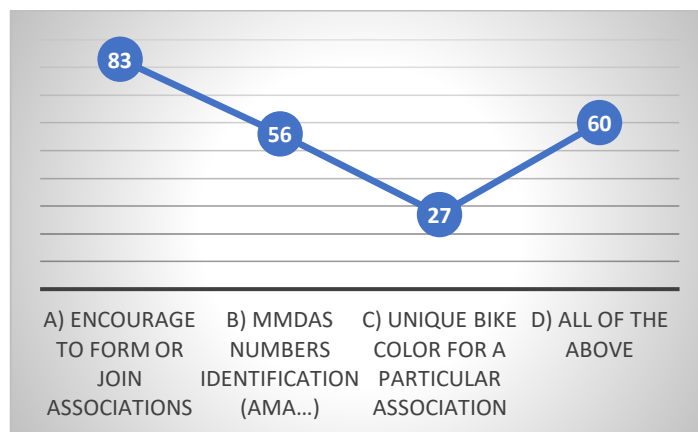


Figure 4.1.14: What will be your suggestion to reduce if not eliminate the menace of motor bikes/tricycles if accepted for commercialization?
 Source: Field Survey 2019

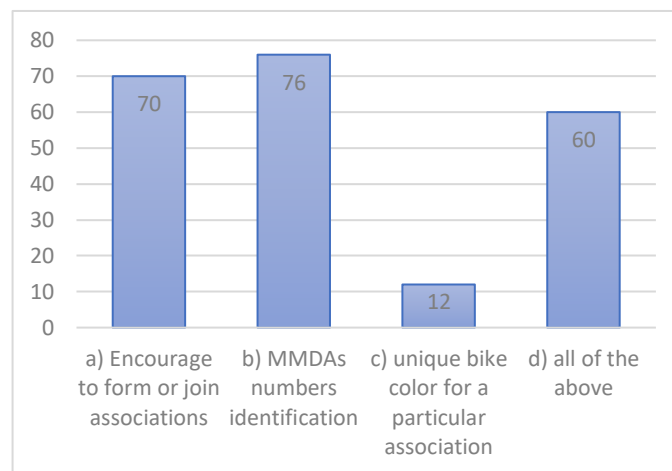


Figure 4.2.23: What will be your suggestion to reduce if not eliminate the menace of motor bikes/tricycles if accepted for commercialization?
 Source: Field Survey 2019

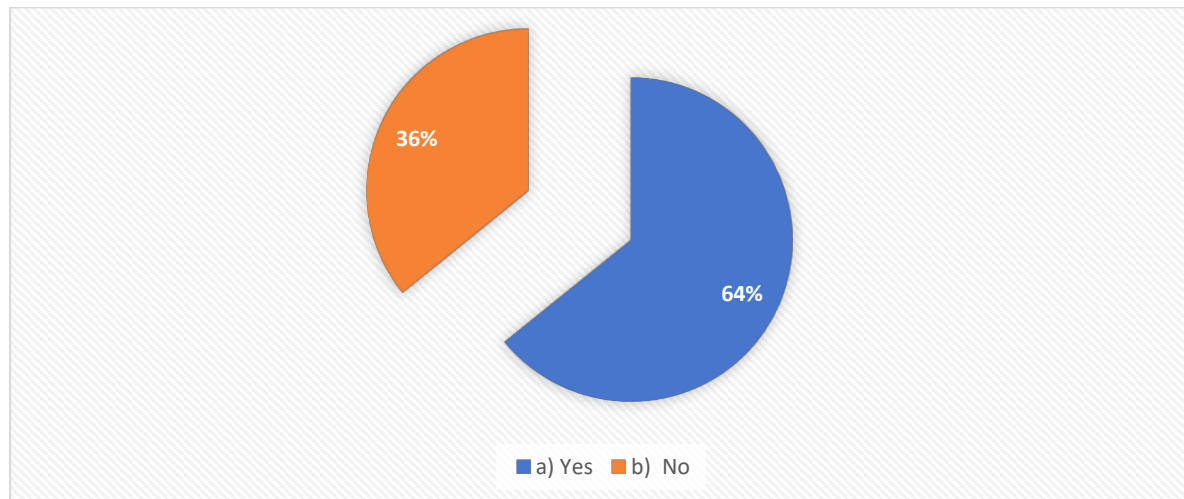


Figure 4.1.16: Do you think the architecture of our roads contribute to the numerous Motor Bikes accidents?

Source: Field Survey 2019

Again, one of the issues majority raised concerns the road architecture of the country. In Fig 4.1.16, 64% are of the opinion that the Ghanaian roads are not friendly to other road users apart from the traditional vehicles. Indeed, it is unacceptable to see these vehicles mingling with motor bikes/tricycles and bicycles on the roads which should have dedicated lanes to avert the many knocks and crashes.

5. Conclusion and recommendations

In tandem with the aim of the research, the study clearly reveals that many of the riders do not possess riding licenses as is posited by Ipingbemi and Adebayo (2016) in the literature which is contributing to many road accidents as a result of unprofessional riding conduct. According to the study, another area that contributes to the accidents is police harassments and extortions which are in conformity with SSATP (2014), a situation the riders try to avert and hence jump traffic lights leading to many crashes. Again, the riders have revealed that some passengers push them not to conform to motor traffic regulations, especially not observing traffic light warnings in peak periods to meet their working times as revealed in this study.

The other risk associated with the operations and or services is non-conformity to the provision and use of crash helmet, especially for passengers of the motor bikes called okada leading to many fatalities as revealed in the study. Expectedly, the study revealed that, about 80% of the bikes do not have insurance, especially, commercial insurance.

A shocking revelation of the study was that of the knowledge by other riders of reported passenger robbery incidents involving okada riders who pick them. Indeed, this is a shocking revelation because until now, the public discourse on this has been a perception.

Agreeably, the study revealed that, there have been several accidents involving and or caused by these motor bikes and tricycles. One other area the public raised alarm is the architecture of Ghana's road network. In fact, elsewhere, bicycles, motor bikes and tricycles have a reserved lane as part of the road architecture to avoid these bikes mingling with motor cars and vehicles, and to a large extent reduce the numerous crashes.

Again, upon all these risks associated to using the services of these bikes, the citizens of Ghana said, during the study, that they will continue to patronize the services of these bikes. In Fig 4.1.11, Fig 4.1.12, Fig 4.2.20 and Fig 4.2.21, over 80% of the respondents in both study groups have indicated that the bikes must be legalized for commercial use.

One other finding of the study is that, the bikes business is a good source of employment for the riders and their owners as 96% opined that they make between GHC150 to GHC300 per month and GHC1,200 per month respectively. Thus, it can be said to be a good source of income, according to these operators.

With respect to these findings and conclusions, it is recommended that, the okada/pragia/keke/motor king/motor kya operations should be legalized for commercial use as indicated in Fig 4.1.11 and Fig 4.2.20 where about 81% of the general public and 100% of the operators have indicated so.

Again, in trying to legalize the commercialization of these bikes' operations, authorities are advised to put up some regulatory measures for strict compliance by the operators. Areas that are to be looked at in the quest to minimize many of the risks associated to their operations should be the formation of identified Associations and an MMDAS identification marks as depicted in Fig 4.1.14 and Fig 4.2.23 respectively.

Finally, enforcement of the usage of crash helmets, acquisition of riding licenses, procuring of commercial insurance for the bikes and in the medium to long-term redesigning the roads to dedicate a lane for the bikes, should be non-negotiable. The study has shown that legalizing these bikes for commercial purposes has inevitable stance but should be under strict regulations.

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The Relationship Between Work Pressures and Audit Performance in Tunisia

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Abstract

The purpose of this paper is to examine the impact of auditor's job pressures on audit performance. Using a sample of Tunisian listed companies and their signature auditors from 2013 to 2018, we demonstrate that job pressures does not impair audit performance in Tunisia.

Keywords: Work Pressures, Audit Performance, Auditors

Introduction

Issues concerning audit quality continued to receive attention of academics, practitioners, and regulatory bodies. During the early years, a specific behavioral concept has appeared in the auditing literature regarding the engagement of auditors with a high number of clients seeking additional fees. Auditors engaged with several clients may lose the capacity to achieve their audit tasks with effectiveness. According to the Public Company Accounting Oversight Board the audit quality can be threatened by heavy workload or deadlines stress. Despite the importance of the presence of job stress in audit practice, academic research regarding this issue are rare. As reported by Xie et Yang (2016), the inaccessibility to a large samples and the resultant lack of empirical studies implies that a majority of research used questionnaires instrument or experimental investigation, and the absence of consensus still exist between academics. As most auditors in developing countries, Tunisian auditors work under pressures due to the heavy workload, deadlines, and potential liability exposure. Therefore, in this study we empirically assess the impact of work pressures on audit performance in Tunisia. Our survey focusses on a sample of Tunisian listed companies in Stock exchange of Tunis and their corresponding signature auditors from 2013-2018.

The Tunisian economic environment presented recently significant development. Financial statements represent a means of help for the interested parties which makes it possible to evaluate firm performance and assess the further profitability of their proper participations. Audit function in this country was created and governed in prime by Commercial Code adopted in 1959. This code was completely revised in 2000. For many years, auditing profession has been dominated by chartered accountants and is monitored by the Order of Chartered Accountants of Tunisia placed under the authority of the ministry of finance. The market audit in Tunisia is dominated by international audit firms BIG4.

Besides representatives of international firms, the rest of the audit market is shared between large national firms and small structures of professional accountants. Fortunately, in Tunisia, audit reports contain the signature of audit partners with their names revealed in the reports. This paper contributes to the accounting literature in different forms. First, our research has important significance, particularly for regulatory bodies in emerging countries, where audit quality played a major role in their capital market. Second, despite the extent of the existence of auditors' job stress in practice, related academic research is rarely addressed. Therefore, our survey can help to reduce this gap by proposing an empirical research in the context of the Tunisian stock market. Third, our study enriches the existent literature of auditor's job stress from an ethical perspective. The rest of this paper of this paper is organized as follows. Section 1 presents a literature review. section 2 exposes the methodology adopted. Section 3 focuses on the presentation and the discussion of the results obtained.

1. Literature review

Financial economics underlines the negative impact of the high number of public customers on the performance known as the effect of work stress (Gul et al., 2013). Research focusing on this effect have attempted to study the relationship between administrators having appointments on several boards and firm performance. A review of previous research shows that there is no consensus on the impact of firm performance and busy directors. Beasley (1996) and Ferris et al. (2003) point out that administrators with several appointments are too busy and therefore cannot carry out their functions properly. However, Fama and Jensen (1983) have shown a positive relationship between the high number of seats of occupied by administrators and the performance of the company. They consider that busy admittatures are more competent monitors. Analogous to managers external auditors act as agents of investors responsible of ensuring the reliability of accounting information. However, the performance of audit engagements my vary from one auditor to another. Despite the importance of job stress in audit engagement, related academic research are limited.

Work stress is defined by Yan and Xie (2016) as *‘a series of physiological, psychological and behavioral responses due to the continuing effects of one or more stressors on individuals in an organization.’*

Auditors, by the kind of their job, are exposed to a stressful atmosphere which has a negative impact on audit quality (Kalbers & Cenker, 2008). Indeed, time budget constraints, as well as different other stress factors are supposed to reduce audit quality. There are several definitions of the audit quality in the academic audit literature the most relevant is that presented by De Angelo(1981) which considers that the audit quality is the probability that the auditor will discover and reveal errors and deviations in financial reports. In audit engagement, the major cause of stress at work is the conflict across restricted auditing resources and heavy volume of work during a short period of time (Lopez and Peter, 2012). According to Lopez and Peter (2012) audit quality is likely to decrease when the volume of work raises within period of peak workload. Hackenbrack and Knechel (1997) proved that audit partners make considerable effort in detecting frauds and bankruptcy risk, examining significant tests and different other activities. Therefore, if the number of customers audited enhances, the work stress enhances too which will negatively affect the audit quality.

In accordance with Incentive theory, it is possible that the influence of stress on audit quality could be reduced or even advantageous when there exist effective job controls on job demands (McClenahan et al., 2007). Gul et al. (2017) state that audit partners working on behalf of a high number of clients are really occupied to run a business. Time deadlines and time budget pressure are considered by Margheim et al., (2011) as one of the major factors influencing auditor behavior. Yan and Xie (2016) have empirically studied the relationship between audit quality and work stress through a sample of listed companies and their auditors in China. First, the study revealed that work stress does not lead to a decline in audit quality. Second, the results of their study showed that work stress negatively affect audit quality in the first engagement with new clients. Furthermore, the study revealed that perceptions of work stress is influenced by individual characteristics of the auditor.

Employing 2803 observations companies from 2010 to 2013 in Malaysia, Lai et al. (2016) shows that auditors with several auditees are associated with lower audit quality. In China, Gul et al. (2013) find a negative relationship between audit partners with more public clients and audit quality. The results of the research

conducted by Zadegan and Aqa`l(2018) in Tehran market highlights the deterioration of audit quality caused by heavy workload. The study developed by Johari et al. (2019) focuses on the views of 203 Malaysian auditors concerning the impact of work stress on audit quality. Findings reveal the absence of association between work overload and audit quality. Survey prove also that time pressures positively affect audit quality, although its affects negatively by social pressures. Relationship between work pressures and audit performance still an empirical issue that must be tested. Therefore, the following hypothesis are proposed:

HYPOTHESE. Audit performance is influenced by auditor's work pressures.

2. Methodology

2.1. Sample selection

The study sample consists of listed Tunisian companies on the stock exchange of Tunis from 2013-2018. Financial companies are excluded from our research since their financial statements have a different structure from those of the non-financial companies. The firm's financial and accounting data was obtained from the database of Tunisian stock exchange. Information's related to auditors are manually gathered using a questionnaire instrument.

2.2. Research variables

-**Audit work pressures** (WP). Job stress is assessed by the number of listed firms audited by an auditor, considering the number of firms and the business complexity of each firm. Thus, we estimate job stress using the equation below:

$$WP = \sum_{i=1}^n \sum_{j=1}^k TA_{ij}$$

where for listed company j audited by auditor i, TA_{ij} indicates the natural logarithm of total assets; k is the total number of listed firms audited by auditor i in the fiscal year; and n is the number of auditors of specific company j.

-**Audit performance** (AP): this variable is assessed by the absolute value of discretionary accruals using the Modified Jones Model.

2.3. Research model

- To test our hypothesis related to the impact work pressure on audit quality we used the following model
- $|DA| = \alpha_0 + \alpha_1 WP + \sum \beta_i FIRMFE_i + \sum \gamma_j AUCFE_j + \sum \mu_k AUDFE_k + \sum \phi_l year_l + \sum \phi_m ind_m + \varepsilon$

With $|DA|$ is the absolute value of discretionary accruals

WP is auditor's work pressure.

Three attributes of audit performance have been considered: firm features (FIRMFE), audit company features (AUCFE) and individual auditor features (AUDFE).

Table 1: Variable Measurement

Kind of variable	Variable	Symbol	Definition
Dependent variable	Audit performance	$ DA $	Absolute value of discretionary accruals
Independent variable	Work pressure	WP	$WP = \sum_{i=1}^n \sum_{j=1}^k TA_{ij}$
FIRMFE	- Financial position	Debt	Debt/asset ratio
	- Size	siz	Natural logarithm of

			total assets
	- Return on assets	retasssets	Net profit /total assets
AUCFE	- Size of audit company	Big4	Big4 company=1; 0 otherwise
	- Switch audit company	Switch	Switched audit company=1; 0 otherwise
AUDFE	-gender	gendr	Minimum one female auditor =1; 0 otherwise
	Degrees	qual	If more than one auditor has a master's degree:0otherwise
Indicator variables	Year	Year	Dummy variable
	Industry	Ind	Dummy variable

3. Results

Findings presented in Table 2 and table 3 reveal the descriptive statistics of our research. Our results indicate that the correlation between work pressure (WP) and $|DA|$ is insignificant in the full sample.

Table 2: Descriptive statistics

	<i>Mean</i>	<i>Median</i>	<i>Min</i>	<i>Max</i>
$ DA $.0995	.05892	.000	1.197
<i>WP</i>	34.594	35.202	22.416	39.462
<i>Debt</i>	.748	.675	.097	2.521
<i>siz</i>	16.287	16.602	18.731	10.257
<i>retasssets</i>	.023	.034	-.543	.269
<i>Big4</i>	0.078	0	0	1
<i>Switch</i>	0.031	0	0	1
<i>gendr</i>	0.015	0	0	2
<i>qual</i>	0.062	0	0	1

Table 3 : Pearson corrélations

Pearson	WP
	ALL SAMPLE
$ DA $	-0.004

Table 4 shows the regression findings of the full sample. The results of our model reveal that when audit performance is evaluated by discretionary accruals the coefficient of WP is positive but not significant, indicating that audit performance is not reduced by job stress in Tunisia. Therefore, the hypothesis of our research is rejected. Our results are similar to those found by Turragan et al. (2017) and Yan et Xie (2016).

Table 4: Multivariate regression

	 DA
WP	0.003(1.03)
Debt	0.052*(4.15)
siz	-0.006**(2.32)
retasssets	-0.002 (-0.69)
Big4	-0.0003(0.06)
Switch	0.002(0.81)
gendr	-0.003(-0.46)
qual	-0.0001(-0.03)
Year, ind	controlled

*p<0.01

**p<0.05

4. Conclusion

Audit studies have recently focused on the issue of investigating the impact of audit pressures on audit performance. This topic has appeared in the contemporary accounting literature as a main area of research, but there is a limited research on this in developing markets. This study, using discretionary accruals as the measure of audit quality, demonstrate that audit quality is not affected by auditor's work stress. The findings of this paper can have policy implications for Tunisian audit market. Further studies can explore the relationship between work pressure an audit quality at the individual level and evaluate the impact of job stress in the case of initial audit.

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Analysis of the Effect of Business Intelligence on Competitive Advantage through Knowledge Sharing and Organizational Innovation in Export Companies

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Abstract

This study aims to analyze the effect of business intelligence on competitive advantage through knowledge sharing and organizational innovation in export companies in the Special Region of Yogyakarta. The list of companies was obtained from the Industry and Trade Office. The variables used in this research were business intelligence, competitive advantage, knowledge sharing, and organizational innovation. This study uses a sample of 83 companies, using purposive sampling technique and data analysis techniques using Partial Least Square (PLS). The results of this study indicate that Business Intelligence has a positive effect on three other variables, namely knowledge sharing, organizational innovation, and competitive advantage, and that knowledge sharing and organizational innovation have a positive effect on competitive advantage. In addition, knowledge sharing and organizational innovation are able to mediate the effect of Business Intelligence on competitive advantage.

Keywords: Effect of Business Intelligence, Competitive Advantage, Knowledge Sharing, Organizational Innovation

INTRODUCTION

Globalization is marked by the countries' integration in the fields of culture, economy, resources, and information technology. Economic globalization encourages international and regional trade cooperation agreements that lead to the creation of a more integrated market and international trade that have an impact on each of the countries involved (Sari & Suhadak, 2017).

Sharma et al (2014) defines economic globalization as a process of integrating the national economy into a global economic system. This process is demonstrated by the increasing openness of a country's economy to international trade, which in turn will create economic relations that influence each other and shape the trade between the countries through the flow of traffic of goods and services. Consequently, government control will increasingly diminish because the globalization process is driven by global market forces, rather than policies or regulations issued by an individual government. International trade activities will affect the economic growth of a country because all countries compete in the same international market (Ritala and Ellonen, 2010).

Globalization has driven the competition which is increasingly unavoidable by countries in the world. Due to free trade, the flow of information, goods and services among countries continues to increase so that it has an impact on economic growth. Nowadays, all companies are trying to stay profitable and confront their competitors, but they face different internal and external challenges. Externally, they face opportunities and threats posed by increasing domestic and global competition such as better-informed customers, higher expectations, and rapid technological advances. Internally, they are meeting more pressure: they have to reduce costs to increase efficiency and effectiveness through improving customer service and creating more customer value.

Most of today's business activities such as manufacturing facilities, cash flow, capital, and distribution networks involve some form of global interaction. This indicates that every company must be managed in such a way as to compete in a global environment (Cateora, 1990; Sharma et al., 2014). Thus, with regard to the role of competitive advantage in the success or survival of an organization or company, recognizing the factors that influence it is essential. The use of information technology that is integrated with business processes can be one of the strategies companies can implement in the midst of strong business competition. Business Intelligence can be a useful strategy because it can be used to analyze data that can later be used by companies to determine their policies.

In carrying out their daily work, all levels of an organization (from employees/subordinates to leaders/superiors) are always connected and or require access to data and information. Business Intelligence makes it easier for all levels of employees to access the data and information needed to help them make better decisions. According to Herschel and Jones (2005), Business Intelligence has a direct impact on knowledge improvement. An effective Business Intelligence system can enhance and promote knowledge and boost the mental model of decision makers. Business Intelligence can be considered as an effective tool used by employees to share knowledge within organizations. This system also helps organizations gain knowledge about competitors, customers, and new technologies that will drive the development of organizational innovation.

Research by Eidizadeh et al., (2017) found that business intelligence has a positive and significant effect on knowledge sharing, organizational innovation and competitive advantage. Business Intelligence has a positive and significant effect through knowledge sharing and organizational innovation, knowledge sharing has a positive and significant influence on competitive advantage, and organizational innovation has a positive and significant influence on competitive advantage. Therefore, the formulation of the problem in this research this study is to test whether business intelligence has a direct effect on competitive advantage and also whether knowledge sharing and organizational innovation has a direct effect on competitive advantage. This study also to test an indirect effect on competitive advantage through the mediating variables of knowledge sharing and organizational innovation.

THEORY AND HYPOTHESIS

1. Effect of Business Intelligence on Knowledge Sharing

Business Intelligence is a business framework that includes processes, instruments, and technologies designed to transform data into information and information into knowledge which then adds value to the organization. With the knowledge gained, organization managers can make better decisions and carry out more efficient business activities with the help of practical plans (Sharma et al, 2014; Sharda et al., 2014).

According to Herschel and Jones (2005), Business Intelligence has a direct impact on knowledge improvement. Effective business intelligence systems can enhance and promote knowledge and boost decision-making models. Therefore, the first hypothesis states:

H1: Business Intelligence has a positive and significant effect on knowledge sharing.

2. Effect of Business Intelligence on organizational innovation

Business Intelligence helps companies store, analyze, and retrieve large amount of information (Herschel and Jones, 2005). Then, the information and knowledge obtained about new competitors, customers, and technologies can be used to create new product innovations or to improve processes and identify effective administrative systems. In short, Business Intelligence enhances innovation in companies. Therefore, the second hypothesis states:

H2: Business Intelligence has a positive and significant effect on organizational innovation.

3. Effect of Business Intelligence on competitive advantage

An organization can outperform its competitors and achieve competitive advantage by realizing the existence and potential of competitors' marketing activities and developing the right strategies (Dyer and Singh, 1998). Business Intelligence is recommended as a useful tool for understanding competition by obtaining information about the competitive environment especially on market forces, public policies, new technology, and competitors. This information is valuable for predicting the future environment in which the company will operate (Akter et al, 2016) and business process based on business information can create competitive advantage (Aydiner et al, 2019). Therefore, the third hypothesis states:

H3: Business Intelligence has a positive and significant effect on competitive advantage.

4. Effect of knowledge sharing on competitive advantage

In the 21st century, organizations are transforming into new models based on knowledge and networks in response to the volatility, uncertainty, complexity and ambiguity of the competition environment (; Ritala and Ellonen, 2010; Jourdan et al., , 2008). In such an environment, knowledge-based assets are the foundation of success and competitiveness that lead to sustainable profits (Akter, et al., 2016). Dyer and Singh (1998) stated that knowledge sharing increases organizational competitiveness. Knowledge sharing allows sustainable competitive advantage (Ritala and Ellonen, 2010). Therefore, the fourth hypothesis states:

H4: Knowledge Sharing has a positive and significant effect on competitive advantage.

5. Effect of organizational innovation on competitive advantage

To survive in a rapidly changing and uncertain environment, organizations must be able to adapt to the increasing complexity and continuous change. In such situations, organizations with a high capacity to innovate will be able to respond to environmental challenges more quickly and to better exploit new products and market opportunities than non-innovative organizations (Jiménez - Jiménez and Sanz-Valle, 2011). According to Porter (1990), the main challenge for companies is to achieve competitive advantage through innovative achievements. Hill et al. (2015) argued that one of the sources for creating competitive advantage is innovation. Innovation can be considered as an important parameter of competitive advantage because it ensures long-term competitiveness (Jiménez et al., 2008). Therefore, the fifth hypothesis states:

H5: Organizational innovation has a positive and significant effect on competitive advantage.

6. Effect of Business Intelligence on competitive advantage mediated by knowledge sharing

Knowledge is viewed as the most important resource in a company (Ling et al, 2008). Effective use of knowledge will not only create competitive advantage, but also improve organizational performance (Zaied, 2012). Business Intelligence systems help organizations create, capture, and utilize the knowledge they need (Jourdan et al, 2008) and share it (Akter et al, 2016). As a consequence, knowledge sharing (Dyer and Singh, 1998) can facilitate Business Intelligence to increase organizational competitiveness. Therefore, the sixth hypothesis states:

H6: Business Intelligence has a positive and significant effect on competitive advantage mediated by knowledge sharing.

7. Effect of Business Intelligence on competitive advantage mediated by organizational innovation

Business Intelligence helps organizations acquire knowledge about competitors, customers, and new technologies and foster organizational innovation. Sandvic (2003) suggests that the more innovative a product is, the higher the value it gives to consumers and the level of differentiation it offers. Therefore, the greater the innovation capacity of an organization, the greater its competitive advantage. As a result, innovation (Hill et al., 2015) can promote Business Intelligence to increase organizational competitiveness. Therefore, the seventh hypothesis states:

H7: Business Intelligence has a positive and significant effect on competitive advantage mediated by organizational innovation.

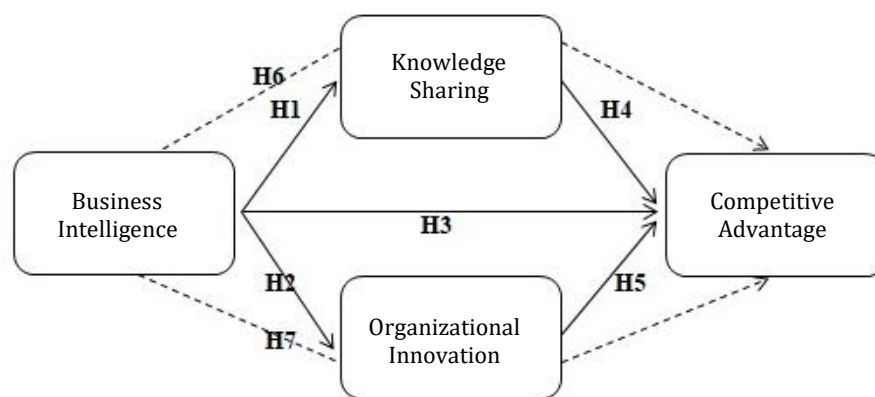


Figure 1 : Research Model

METHOD

This research is survey research, a systematic collection of information from respondents to understand and predict some aspects of the behavior of the population of interest. The population in this study were export companies registered in the Industry and Trade Office of the Yogyakarta Special Province. Respondents were selected through purposive sampling, a sampling technique in which sampling is limited to certain types of people who can provide the desired information, either because they are the only ones who have it or they meet several criteria determined by the study (Sekaran and Bougie, 2016). The criteria used in this research were companies already using computer technology (software & hardware) to collect data, process it, and store the information. Based on these criteria, the number of samples obtained was 83 companies.

To obtain data, questionnaire was used. Questionnaire is a data collection technique carried out by giving a set of questions or written statements to be answered by respondents (Sugiyono, 2012: 142). The results of the questionnaire were tested with validity and reliability tests. The validity test is used to measure whether the questionnaire is the appropriate measuring instrument. A questionnaire is deemed valid if the questions on the questionnaire are able to reveal something to be measured by the questionnaire. Testing the validity of this study used the validity that correlates the score of each item of the question with the total score, which is the sum of each item's score. If the significance value is $\alpha \leq 0.05$, a question item is considered valid (Ghozali, 2011). Meanwhile, the reliability test is used to determine the extent to which the measurement results remain consistent if the measurement is carried out more than once for the same indicator using the same measuring instrument. According to Ghozali (2011), if the Cronbach Alpha value is >0.60 , the question items in the questionnaire are declared reliable, but if the Cronbach Alpha value is <0.60 , the questions are deemed unreliable.

This study used Partial Least Square (PLS) analysis with the Smart PLS application. PLS is a variant-based structural equation modeling (SEM) analysis that can simultaneously test the measurement model as well as test the structural model (Jogiyanto and Abdillah, 2009). The measurement model is used to test the validity and reliability, while the structural model the causality (hypothesis testing with predictive models). PLS can be used on small samples, with a minimum recommendation of between 30 and 100 cases (Yamin and Kurniawan, 2009).

RESULT AND DISCUSSION

The first part of the model evaluation is to assess the results of the measurement model (outer model) by testing Convergent Validity, Discriminant Validity, and Unidimensionality.

1. Convergent Validity

The value of convergent validity is the value of loading factors on latent variables with their indicators with an expected value of >0.7. Figure 2 shows that the loading factor value of all items is >0.7. In addition to the loading factor value, convergent validity can also be seen from the Average Variance Extracted (AVE) value. In this study, the AVE value of each construct was above 0.5 and therefore no convergent validity problem was found in the model being tested.

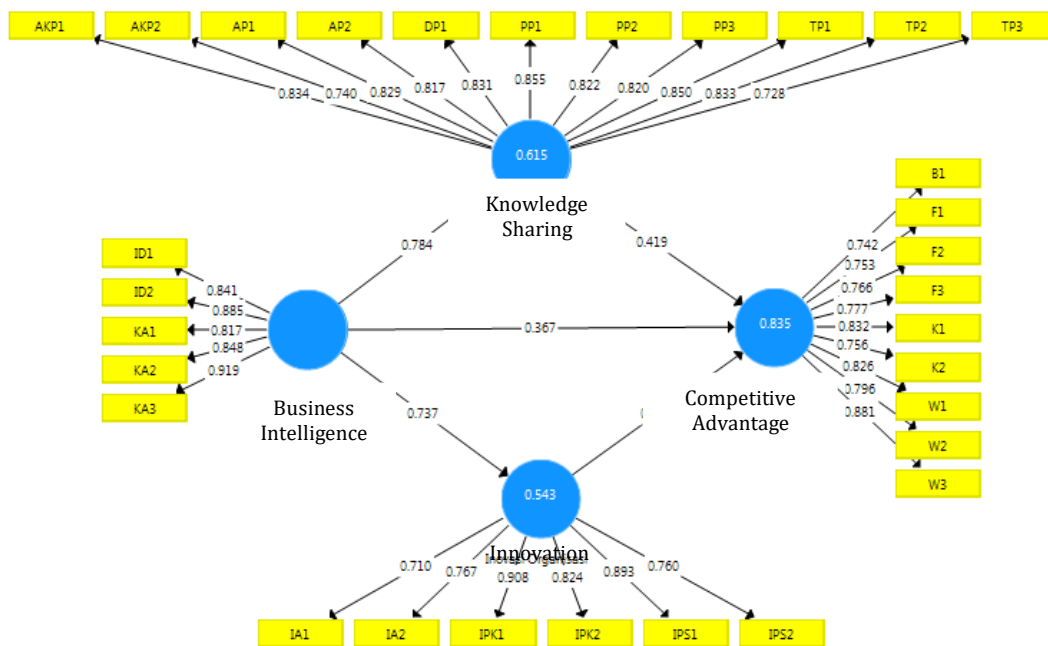


Figure 2 : Outer Model Testing Result

2. Discriminant Validity

As the problem of convergent validity was not found, the next step would be to test discriminant validity. This value is the value of the cross-loading factor which is useful to identify whether the construct has sufficient discriminant. This is tested by comparing the loading value of the intended construct with the loading value of other constructs, and the resulting value must be greater.

Table1. *Cross Loading Factor*

Indicator	Variables			
	Business Intelligence	Knowledge Sharing	Organizational Innovation	Competitive Advantage
ID1	0.841	0.617	0.650	0.694
ID2	0.885	0.757	0.707	0.793
KA1	0.817	0.599	0.568	0.697
KA2	0.848	0.720	0.652	0.750
KA3	0.919	0.672	0.587	0.691
AKP1	0.608	0.834	0.691	0.656
AKP2	0.685	0.740	0.697	0.615
DP1	0.581	0.831	0.630	0.658
TP1	0.716	0.850	0.708	0.838
TP2	0.551	0.833	0.589	0.677
TP3	0.557	0.728	0.591	0.691
PP1	0.598	0.855	0.595	0.690
PP2	0.564	0.822	0.618	0.629
PP3	0.619	0.820	0.632	0.676
AP1	0.742	0.829	0.739	0.783
AP2	0.744	0.817	0.671	0.799
IPK1	0.650	0.684	0.908	0.716
IPK2	0.615	0.678	0.824	0.663
IPS1	0.703	0.806	0.893	0.780
IPS2	0.487	0.514	0.760	0.585
IA1	0.565	0.573	0.710	0.579
IA2	0.547	0.621	0.767	0.584
K1	0.784	0.805	0.748	0.832
K2	0.638	0.574	0.569	0.756
F1	0.480	0.659	0.543	0.753
F2	0.632	0.652	0.558	0.766
F3	0.719	0.595	0.660	0.777
W1	0.673	0.674	0.612	0.826
W2	0.606	0.752	0.595	0.796
W3	0.734	0.758	0.772	0.881
B1	0.706	0.689	0.654	0.742

Source: Data Processing Results using PLS, 2019

The table above shows that each indicator in the research variables has the largest cross loading value on the variable it forms compared to the cross-loading value for other variables. Based on these results, it can be stated that the indicators used in this study have acceptable discriminant validity.

3. Unidimensionality

To ensure that there are no measurement problems, the final step in evaluating the outer model is to test the model unidimensionality. The unidimensionality test was carried out using indicators of composite reliability and Cronbach's Alpha. For these two indicators, the cut-off value point is 0.7.

Table 2. Composite Reliability and Cronbach's Alpha

Variables	Composite Reliability	Cronbach's Alpha
Business Intelligence	0.936	0.914
Knowledge Sharing	0.956	0.949
Organizational Innovation	0.921	0.896
Competitive Advantage	0.938	0.926

Source: primary data processing results, 2019

The table 2. shows that all constructs have composite reliability and Cronbach alpha of higher than 0.7, which means that there is no reliability or unidimensionality problem in the model.

The second part of model evaluation is to evaluate the results of the structural model (inner model) in three ways: R2, Q2, and Gof (Goodness of fit).

Table 3. R square

Variables	R²
Knowledge Sharing	0.615
Organizational Innovation	0.543
Competitive Advantage	0.835

Source: primary data processing results, 2019

The goodness-of-fit assessment is known from the Q-Square value. The value of Q-Square has the same meaning as the coefficient of determination (R-Square) in regression analysis, where the higher the Q-Square, the more fit a model is with the data. Below are the results of the Q-Square calculation:

$$Q^2 = 1 - (1 - R1^2)(1 - R2^2)(1 - R3^2)$$

$$Q^2 = 1 - (1 - 0.615^2)(1 - 0.543^2)(1 - 0.835^2)$$

$$Q^2 = 0.867$$

The Q-Square value of 0.867 shows the magnitude of the variance of the research data which can be explained by the research model reaching 86.7%, while the remaining 13.3% is explained by other factors outside this research model. Based on this result, the model in this study has an acceptable goodness-of-fit. Whether a hypothesis is accepted or rejected can be seen from the significance value between constructs, t-statistics, and p-values. In this way, measurement estimates and standard errors are no longer calculated with statistical assumptions, but are based on empirical observations. In the bootstrapping method in this study, the hypothesis is accepted if the significance value is t-value > 1.96 and/or the p-value is <0.05. Thus, Ha was accepted and Ho was rejected and vice versa.

Table4. Hypothesis Testing Results with Partial Least Square

		Original Samples	T -Statistics	P-Values
Business Intelligence → Knowledge Sharing	→	0.784	6.324	0.000
Business Intelligence → Organizational Innovation	→	0.737	5.764	0.000
Business Intelligence → Competitive Advantage	→	0.367	4.158	0.000
Knowledge Sharing → Competitive Advantage	→	0.419	3.700	0.000
Organizational Innovation → Competitive Advantage	→	0.200	2.236	0.026

Source: primary data processing results, 2019

Business intelligence had a positive influence on knowledge sharing, as substantiated by the original sample value of 0.784 (positive) with a t-value of 6.324 and a p-value of 0.000. This means that the higher the application of Business Intelligence- such as data integration across all functions and business partners and analytics capabilities-, the higher the level of knowledge sharing such as knowledge acquisition, knowledge documentation, knowledge transfer, knowledge creation, and knowledge application. The results of this study are in line with research conducted by Eidizadeh (2017) and Zieba, et al (2017) that the research focus on an export company in Iran. A positive value on the parameter coefficient means that the increase in business intelligence has an effect on the increase in knowledge sharing. So it can be concluded that business intelligence has a positive influence on knowledge sharing in export companies in the Special Region of Yogyakarta. Thus the first hypothesis is accepted

Business intelligence had a positive influence on organizational innovation, as demonstrated by the original sample value of 0.737 (positive) with a t-count value of 5.764 and p-value of 0.000. The results show that business intelligence has a positive effect on organizational innovation, which is in line with the findings of Eidizadeh (2017). It can be argued that business intelligence provides the necessary conditions for innovation in organizations through the provision of data, knowledge and information.

Business Intelligence had a positive influence on competitive advantage, as shown by the original sample value of 0.367 (positive) with a t-count value of 4.158 and p-value of 0.000. This means that the higher the application of Business Intelligence- such as data integration across all business functions and partners and analytics capabilities-, the higher the level of competitive advantage such as quality, flexibility, time, and cost. It means that business intelligence is able to transform data into information, and information is transformed into knowledge that is designed through various processes, tools, and technology that can add value to the export

company. Using the knowledge gained from business intelligence, a manager can choose the best decision and operate his business activities more efficiently by devising a practical plan for his organization, resulting in increased competitive advantage for their export company. The results of this study are in line with research conducted by Eidizadeh (2017).

Knowledge sharing had a positive effect on competitive advantage, as proven by the original sample value of 0.419 (positive) with a t-count value of 3.700 and a p-value of 0.000. This means that the higher the application of knowledge sharing - such as knowledge acquisition, knowledge documentation, knowledge transfer, knowledge creation and knowledge application -, the higher the level of competitive advantage such as quality, flexibility, time, and cost (Eidizadeh, 2017; Li and Zhao, 2006)

Organizational innovation had a positive effect on competitive advantage, as supported by the original sample value of 0.200 (positive) with a t-count value of 2.236 and p-value of 0.026. This means that the higher the adoption of organizational innovations - such as product innovation, process innovation, and administrative innovation, the higher the level of competitive advantage such as quality, flexibility, time, and cost (Eidizadeh, 2017; Jiménez et al., 2008)

Table 5. Hypothesis Testing Results with Partial Least Square

	Original Samples	T- Statistics	P-Values
Business Intelligence → Knowledge Sharing → Competitive Advantage	0.329	3.220	0.001
Business Intelligence → Organizational Innovation → Competitive Advantage	0.147	2.232	0.026

Source: primary data processing results, 2019

From Tabel 5 has illustration that the effects, both direct and indirect, show positive effects. Thus, it can be concluded that knowledge sharing mediates the relationship between business intelligence and competitive advantage in a complementary (partial mediation) manner. Business intelligence provides the necessary conditions for knowledge sharing and push innovation in organizations through the provision of data, knowledge and information, the higher the ability of an export company to innovate in the organization, it will increase competitive advantage, achieve high performance, and survive in the global economy (Eidizadeh, 2017; Ling et al, 2008).

CONCLUSION

This study concludes that for the export companies officially registered in the Special Region of Yogyakarta, Business Intelligence has a positive effect on three other variables, namely knowledge sharing, organizational innovation, and competitive advantage, and that knowledge sharing and organizational innovation have a positive effect on competitive advantage. In addition, knowledge sharing and organizational innovation are able to mediate the effect of Business Intelligence on competitive advantage in complementary (partial mediation).

RECOMMENDATION

- 1) This practical suggestion is addressed to the export companies which are the objects of this research. Based on the research results, the direct effect of Business Intelligence on competitive advantage has a smaller coefficient value than the effect of Business Intelligence on knowledge sharing and organizational innovation. Therefore, companies are expected to further improve the application of Business Intelligence directly. Increasing Business Intelligence can be done by developing a company business plan and determining business performance indexes. The development of the business plan is expected to increase

competitive advantage. Meanwhile, with regards to the indirect effect, the role of organizational innovation in mediating the effect of Business Intelligence on competitive advantage has less value than the role of sharing knowledge in mediating the effect of Business Intelligence on competitive advantage. Therefore, the companies are expected to improve the quality of innovation which in turn will boost the effect of Business Intelligence on competitive advantage.

- 2) Future studies are expected to further evaluate some of the questions included in the questionnaire. It cannot be denied that misunderstanding in interpreting the statement items may have occurred because respondents may have different understanding of the same sentence. Therefore, respondents need to get assistance or a brief explanation of the variables used in the study.
- 3) The population in this study is relatively small, and therefore further research is expected to be able to expand the study population (using locations outside the Special Region of Yogyakarta).

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Oil and Mortality

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Abstract

This paper investigates the impacts of a large and exogenous oil price shock in December 1973 on mortality rates of the major oil producer nations of the Middle East and North Africa. We use longitudinal data from 1960 to 2014 and we apply the difference-in-differences approach to investigate the main question of the research. Our findings show that the oil price shock did not lead to higher GDP per capita, but it did lead to lower mortality. These findings are puzzling. A possible explanation is that the oil price shock allowed for higher spending on publicly funded health care. We find a positive impact of the oil price increase on the number of hospital beds which perhaps suggests that higher oil revenues increased spending on public health and that possibly decreased mortality.

Keywords: Oil Price Shock, Oil Revenue, Mortality

1. Introduction

An irony of our world is that the countries that are blessed with an easy income from natural resources are not usually blessed with higher welfare and prosperity. Would the people of resource-rich nations be healthier and live longer if they did not have their natural resources? In this study, applying an exogenous oil price shock in 1973 we attempt to shed light on the impacts of oil revenues on the mortality rates of major oil producer nations. The story goes back to the attempts of the Shah¹ of Iran to increase the price of oil in the 1970s. Iran was a major producer of oil in those days. Hence, it possessed a significant amount of power in OPEC. The Shah's attempts to increase oil prices go back to 1971 which he successfully increased the oil price from \$1.64 to \$4.1 in three years. However, the real shock came in 1973 when the prices skyrocketed. In December 1973, the Shah forced OPEC² members to increase the price of crude oil by more than three hundred percent. The global price of crude oil which was \$4.1 in December 1973 increased to \$13.0 in January 1974. The documents, including a partially declassified CIA report entitled, *Shah of Iran Culprit in High Oil Prices*, show that the Shah, was the key person that can be blamed for the oil price shock of 1973-1974. Even though the OPEC members should agree on the oil price policies, the other OPEC members were not happy with the Iran's attempt for increasing the oil price. Saudi Arabia, another major oil producer and powerful member of OPEC tried to stop Iran from raising the prices. The Shah, who thought the oil reservoirs of Iran would be depleted before the year 2000, tried to industrialize Iran as fast as possible to eradicate poverty. The Shah of Iran dreamed about bringing back the great

¹ Mohammad Reza Shah Pahlavi, King of Iran from 1941 until 1979.

² The Organization of the Petroleum Exporting Countries (OPEC) is an organization of some major oil suppliers that acts like a cartel to control the global price of oil.

Persian civilization³, and needed money to fund his dream. The following quote by Garavini, G. (2011) explains why the Shah was interested in increasing the prices:

“During period of high production, Shah hopes to see Iran transformed into an industrial power comparable with France or West Germany. Needs high prices and high production rates to see Iran make such great strides during lifetime. Therefore, his insistence on huge price hikes and refusal to cut back production” (p. 481).

Painter (2014) argues that in the late 1960s, the British wanted to withdraw their military forces from the Persian Gulf in the south of Iran. Therefore, the United States, busy with the Vietnam war, turned to Iran to serve as the guardian of the Persian Gulf. The Shah of Iran eagerly accepted to be the guardian of the Persian Gulf because he was trying to establish the power of ancient Persia once again. In 1972, the Nixon administration agreed to sell any military equipment except nuclear weapons to Iran. Between 1970 and 1978, Iran purchased over 20 billion dollars worth of weapons and other military equipment from the US. Painter maintains that “higher [oil] prices allowed Iran to increase its military spending and replace Great Britain as the “guardian of the gulf.” (p. 197).

Why it matters to study the impacts of oil revenues on mortality? One reason is that the plausible impacts of oil revenues on mortality are neglected in the literature. A large literature studies the impacts of income from natural resources on economic growth. Although this literature has tackled crucial questions, the problem is that economic growth solely is an imperfect proxy for welfare. In a highly unequal society that a small percentage of the population controls most of the wealth of the nation, economic growth could be noticeably high. Unlike economic growth, mortality could be highly informative about the well-being of the whole population. Oil revenues could bring large amounts of income to a country. If oil income is invested in building and improving hospitals and in other health-relevant factors, even in the short term, it can have a significant impact on reducing child mortality. The public sector often plays a highly crucial role in health care. Perhaps higher oil revenues for the public sector facilitate more spending on health care. Another reason is that it is intrinsically valuable to understand the factors that save human life and decrease mortality.

Preston⁴ (2007) might be the most influential study that investigates the connection between income and mortality. He argues, besides an improvement in health services such as an increase in quality and quantity of the hospitals and clinics, a higher level of wealth helps a society to afford more nutritious and healthier food, leisure, education, etc. that might indirectly affect mortality rates. He finds an association between national income per head and life expectancy for the 1900s, 1930s, and 1960s. His study has other important findings as well. First, income per capita has a non-linear, positive effect on life expectancy. The effect attenuates as countries become richer. Second, the relationship has shifted upward over time. Third, “Factors exogenous to a nation’s level of income per head have had a major effect on mortality trends in more developed as well as in less developed countries” (p. 489). He explains that income levels per se account for 10 to 20 percent of growth in life expectancy. Factors exogenous to a country’s current level of income account for 75 to 90 percent. He argues that the association between national income and life expectancy is indirect and if higher national income goes to public health, nutrition, education, etc. then it can decrease mortality and improve life expectancy:

There is no reason to expect a direct influence of national income per head on mortality; it measures simply the rate of entry of new goods and services into the household and business sectors. Its influence is indirect; a higher income implies and facilitates, though it does not necessarily entail, larger real consumption of items affecting health, such as food, housing, medical and public health services, education, leisure, health-related research and,

³ He even published a book in 1978 entitled *Toward the Great Civilization*

⁴ Preston published the first version of his paper in 1975

on the negative side, automobiles, cigarettes, animal fats and physical inertia (p. 484.)

There has been debates on the relative importance of the mentioned factors above. While Preston (2007) and Deaton (2006) emphasize the roles of public health measures, Fogel (2004) puts more weight on the of impacts of rising income on nutrition. In addition to Preston (2007), Kitagawa and Philip (1973), Cutler et al. (2006), Cristia (2007), Mackenbach et al. (2008), Duggan (2008); Braveman et al. (2010), Waldron (2013), Chetty et al. (2016) have found that a greater wealth does lead to a lower mortality and higher life expectancy. However, not every study finds a significant effect of income on mortality reduction. At least two studies including Stolnitz (1965) and Demeny (1965) find no significant relationship between income per capita and mortality.

The impacts of oil price shocks on different aspects of an economy have been widely discussed in the literature (see e.g. Park and Ratti, 2008; Jimenez-Rodriguez, 2008; Farzanegan and Markwardt, 2009; Iwayemi and Fowowe, 2011; Aydin and Acar, 2011; Scholtens and Yurtsever, 2012; Cunado and de Gracia, 2014; Gao et al., 2014; Kang et al., 2014; Zhang and Qu, 2015; Tsai, 2015; Cunado et al., 2015; Ju et al., 2016; Zhang and Tu, 2016; Nusair, 2016; Zhao, 2016; Kim et al., 2017; Cross and Nguyen, 2017; Lee et al., 2017; Karnizova and Reza, 2018; Moshiri and Moghaddam, 2018; Nasir et al., 2018; Ioannidis and Ka, 2018; Oladosu et al., 2018; Lorusso and Pieroni, 2018; Tchatoka et al., 2018; Herrera et al., 2019; Lee and Lee, 2019; Nusair and Olson, 2019; Grigoli, et al., 2019; Bergmann, 2019). However, the mentioned studies are different from our paper because what they consider as oil price shocks is not a same concept as what we refer to as the 1973 oil price shock. The oil price shocks in the mentioned studies mostly refer to oil price volatilities or oil price uncertainties. However, in our paper we focus on the oil price increase in 1973 as an exogenous variation in oil price to study the impacts of oil revenues on mortality in oil producing nations. In addition, the impacts of oil price change or oil price shocks on welfare and economies of the oil producing nations has not received attention in the literature and most of the studies focus on the economies of the large oil consumers such as the United States and China.

Note that, as the results of this paper confirms, the oil price shock in 1973 had a negative and significant impact on mortality rate (i.e. decreased mortality) and at the same time led to a lower rate of per capita economic growth. The reasons why oil revenues might negatively affect economic growth has been discussed in the Resource Curse literature. The Resource Curse literature mostly argues that natural resource discoveries decrease economic growth and income per capita (see e.g. Sachs and Warner, 1995; Velasco, 1997; Gylfason et al., 1999; Tornell and Lane, 1999; Leite and Weidmann, 1999; Ross, 2001; Papyrakis and Gerlagh, 2007; Caselli and Cunningham, 2009; Brollo et al., 2010; Vicente, 2010; Van der Ploeg, 2011; Sala-i Martin and Subramanian, 2013). Resource curse studies argue that due to reasons such as Dutch Disease, corruption, weakening the institutions, etc. income from natural resources has an adverse impact on economic growth. For example, Papyrakis and Gerlagh (2007) argue that abundance of natural resources increases corruption and decreases R&D expenditure, openness, schooling, and investment. Also, they maintain that in more volatile economies with poor financial systems, high corruption, lack of rule of law, and political issues the mentioned problems could be more severe. Also, other studies show natural resource windfalls might decrease investment and openness and have negative effects on schooling and economic growth (Papyrakis and Gerlagh, 2007).

One explanation for resource curse relates to change in incentives or behavior of the politicians. Caselli and Cunningham (2009) argue that income from natural resources can alter the incentives of the leaders and make them act in an opposite direction of well-being of their societies. Also, Velasco (1997) and Tornell and Lane (1999) maintain that a windfall of natural resources can have adverse effects on economies through political processes such as increased in rent-seeking. In addition, other studies of the resource curse literature emphasize an increase in corruption and a decrease in the quality of the politicians because of natural resource abundance (Brollo et al. 2010; Vicente 2010).

Another explanation for a negative impact of natural resource discoveries on economic growth is “Dutch Disease” which argues that the export of natural resources tends to increase exchange rates and hence diminishes

the competitiveness of industrial exports (see e.g. Corden 1982; Corden and Neary, 1984; Sachs and Warner, 1995; Gylfason et al., 1999; Van der Ploeg, 2011; Sala-i Martin and Subramanian, 2013).

In this paper we find negative impacts of the oil price shock of 1973 on GDP per capita as well as on mortality. Also, we find positive impacts of the oil price shock on hospital beds. Therefore, it seems that spending on public health has been increased after increase in price of oil. Because health sector is considered as a services sector Dutch Disease can provide one explanation for our results. Dutch Disease is hypothesized by Corden (1982) and Corden and Neary (1984). Dutch Disease hypothesizes that an exogenous shock in oil price increases the real exchange rate which results in decline in production of the agriculture and manufacturing sectors and increases the production of the services sector.

In Dutch Disease hypothesis the whole economy is divided to the sectors that produce tradable and non-tradable outputs. The tradable sectors include booming sector (oil) and lagging sector (agriculture and manufacturing). The non-tradable sector only includes services sector. The tradable sector is subject to global competition and the price of the outputs of the tradable sector (oil, manufacturing, and agriculture) are determined abroad by the global supply and demand functions. However, the price of the outputs of non-tradable sector (services) is not subject to global competition.

Corden and Neary (1984), differentiate a *resource movement effect* from a *spending effect*. The resource movement effect occurs in a condition that the supply of oil is not perfectly inelastic and an increase in global price of oil shifts up the demand for capital and labor in the oil (booming) sector. This will lead to larger return to capital and higher wages in the booming sector. In a condition that production factors are mobile this will cause a shift of capital and labor from services and lagging sectors (i.e. agriculture and manufacturing) to the booming sector (i.e. the oil sector). The employment and output in the booming sector increase, while employment and output in lagging and services sectors decline. Decline in output of the lagging sectors is referred to as “direct de-industrialization.” The price of lagging sector outputs is determined abroad and therefore remains unchanged. Fall in the production of services causes excess demand and hence a rise in the price of services. Therefore, the price of non-tradable products relative to the price of tradable products increases which leads to an increase in real exchange rate.

Usually the resource movement effect does not happen because the number of workers in the booming sector is low comparing to the whole economy. Nevertheless, the spending effect is likely to occur. The spending effect takes place because a raise in oil prices increases profits and wages in the oil sector which improves the aggregate demand in the whole economy. This does not affect the prices of manufacturing goods and oil since their prices are determined abroad by the global supply and demand functions, but prices of services increase. This again results in an increase in real exchange rate. The increase in price of services occurs because the rise in aggregate demand in the whole economy transfers to the services sector as well. If labor is mobile between the tradable and services sectors, an increase in the demand for services will lead to an upward shift in the supply of services. Also demand for labor and therefore wages in the services sector increase.

This will encourage workers to move from the tradable sector (i.e. oil and manufacturing) to the services sector and pushes the tradable sectors to increase their wages. However, they cannot compete and their profits fall. The resulting drop in employment and outputs of booming and lagging sectors is referred to as “indirect de-industrialization.” by Corden and Neary (1984).

Combining the two effects, the Dutch Disease hypothesis generates some important predictions. One, there is an unambiguous decrease in production and employment in the manufacturing sector. Second, because the resource movement effect and the spending effect pull in opposite ways the overall effect on employment and production of the services and oil sectors is ambiguous. Nevertheless, if the oil sector employs a low ratio of workers of the whole economy, then the spending effect dominates the resource movement effect. This leads to increase in output and employment of services sector. In practice it has been shown that the spending effect dominates the resource movement effect (Oomes and Kalcheva, 2007; Hasanov, 2013).

The mechanisms and the literatures discussed previously in this section provide some insights about the plausible impacts of the oil price shock of 1973 on mortality, and economic growth of the oil producer countries. To the best of our knowledge a similar study has not been done before. Therefore, this empirical study attempts to fill this gap in the literature. For reasons that are discussed in the Empirical Design section of the paper, difference-in-differences fixed effect models are applied to investigate the main question of the research.

The key findings of this research can be summarized as follow:

- a. The oil price increase of 1973 decreased mortality rates including infant mortality rate, mortality under age 5, adult female mortality rate, and adult male mortality rate in the oil producing nations of the Middle East and North Africa.
- b. Another impact of the oil price shock is that it decreased GDP per capita. This result confirms the findings of the resource curse literature.
- c. Yet another finding is the positive impact of the oil price shock on the number of hospital beds. This finding suggests that the oil producing nations improved their investments in health care after the windfall of oil revenue from the oil price shock.

In the discussion section we argue that the results of this paper could be perfectly be explained by Dutch Disease hypothesis. Yet, another explanation why hospital beds and mortality rates have improved despite the negative impact of the oil price shock on economic growth relates to the behavior and incentives of the politicians. Due to failure of the politicians in preventing resource curse they might try to invest on visible projects to people that may improve their popularity. Investing in health care such as building hospitals are visible to citizens and therefore might help the politicians to stay in power longer.

The rest of this paper is organized as follow. Section 2 outlines the empirical design of the research. Section 3 explains the Data and treatment assignment. Section 4 provides the results and section 5 presents the conclusion of the study.

2. Empirical design

Since the price shock was managed by the Iranian king, the increase in oil prices could be an endogenous variable for the Iranian economy. Nevertheless, it's unlikely that the price shock in 1973 was an endogenous variable for the economy of other oil producer nations. The oil price increased based on the decision of a person outside their country without them having a significant impact on the process. Hence the oil price shock of 1973-1974 is an exogenous variable for other nations, if not for Iran, and in this paper, we apply that to study the impacts of oil revenues on mortality in oil producing nations. The CIA report suggests that perhaps Venezuela was a supporter of Shah's decision. For this reason and other reasons that will be discussed later in the paper, Venezuela is not included in this paper. Hence, there is no concern about possible endogeneity of oil price increase in Venezuela's economy.

In this paper difference-in-differences (DID) approach has been applied to investigate the impacts of the oil price shock in 1973 on mortality rates. Also, we apply the same approach to estimate the impact of the oil shock on economic growth and hospital beds. Difference-in-differences (DID) approach estimates the impact of an event on an outcome variable by comparing the average change in the outcome variable for the treatment unit and the average change for the control group over time. We apply this approach because it provides a nice framework to investigate the impact of an event (an increase in oil price) on an outcome variable (mortality, for example). Card and Krueger (1994) might be the most famous study that used the difference-in-differences approach. They investigated the impacts of an increase in minimum wages (an event) on employment (an outcome variable) at fast food industry in New Jersey and Pennsylvania.

Before applying DID, we divide the countries in two groups. One is the treatment group and the other is the control group. A treatment unit, which is a country in the treatment group, is one of major oil producer nations. And the control countries are nations that do not produce oil in the same region (i.e. the Middle East and North Africa) with the treated countries.

We apply the following model to estimate the average effect of the treatment on the outcome variables:

$$Y_{ct} = \beta_1 + \beta_2 Post_t + \beta_3 Treat_c + \beta_4 Treat_c * Post_t + \alpha_c + \gamma_t + \epsilon_{ct} \quad (1)$$

where Y_{ct} is the outcome variable in country c and year t . $Post_t$ is an indicator which takes value one if $t > T_0$ where T_0 is the event year (i.e. 1973). $Post_t$ is zero for the years before the event. $Treat_c$ is an indicator that takes a value one if a country is treated (i.e. it is an oil-producing country). $Treat_c$ takes a value zero if a country is not treated (i.e. it is not an oil-producing country and it is one of the countries in the control group). α_c is country fixed effect. γ_t is year fixed effect dummies for year t . This variable controls for the common shocks experienced across the region.

A key assumption of the difference-in-differences model is the common trend assumption. In fact, the identification in the difference-in-differences models relies on the common trends (parallel trends) assumption that requires the dependent variable for the treatment unit and the control group have the same trends. If the two groups have the same trend, then the differences should be due to the treatment.

The common trend assumption is not easy to verify. However, one can show that the outcome variable in the control and treatment groups are parallel before the treatment. Even if the pretreatment trends are parallel, changing policies and conditions after the treatment could affect the results. In this paper, the outcome variable which is Y_{ct} should be parallel for the treated countries and control group before the treatment. During the post treatment period, based on the mentioned assumption, if there was not a treatment, the outcome variable should be parallel in the treated and the control units. To meet the mentioned assumption, we limit this research to the Middle Eastern and North African countries. Some sub-Saharan African countries such as Nigeria are among major oil producers, but experienced high death rates in 1980s and 1990s because of reasons unrelated to oil revenues. Thus, for them the parallel trend assumption does not hold and they are not included in the analysis. In addition, Venezuela is one of top oil producing counties in Latin America, but again because the parallel trend assumption was not satisfied it is not included in the paper. Including the industrial European countries such as Norway which is among major oil producer nations violates the same assumption. The reason is that timing, pace, and level of industrialization among European countries that would create a control group for Norway significantly vary which makes it difficult to capture the impacts of oil revenues on mortality in Norway relative to its potential counterfactual. In other words, since the European nations have begun to industrialize not at the same time and same level, β_4 in equation 1 might get affected by timing and pace of industrialization of the treated and control countries and fail to show an unbiased impact of the oil price shock on mortality.

3. Data and treatment assignment

The source of oil production data is International Petroleum Encyclopedia. The source of GDP per capita is Maddison Project Database (MPD). Also, the global oil prices are taken from The World Bank Commodity Price Data. The source of the rest of the data is the World Bank.

The oil-producing countries that are considered as treated countries in this paper include Algeria, Bahrain, Iran, Iraq, Kuwait, Libya, Oman, Qatar, Saudi Arabia, Syria, Yemen, and United Arab Emirates. Also, the control group which are some other countries in the Middle East and North Africa (i.e. same region as the treated group) include Djibouti, Israel, Jordan, Lebanon, Morocco, Tunisia, Turkey. Because of possibility of endogeneity of the oil shock for the Iranian economy in some of the regressions Iran is excluded.

Figure 1 and shows the global price of oil from 1960 to 2005. The oil price shock in 1973 is charted using a dashed red line. Until the 1970s the price of oil was low for decades. As can be seen in Figure 1 from 1960 to 1970 the price of oil actually decreased a few cents each year. The oil price which was 1.63 U.S. dollars in 1960,

over a decade, decreased to 1.21 U.S. dollars in 1970. However, after the Shah's pressure on the Seven Sisters⁵, an oligopoly that dominated the oil reserves and controlled the price of oil for decades, the price started increasing in the 1970s. In 1970 the Shah of Iran threatened the Seven Sisters that if they didn't consider the wish of the OPEC members in production/price negotiations, the OPEC members would change their policy and they would decide about oil prices themselves. After this event the Seven Sisters agreed to increase the price of oil to adjust for inflation of both producer and consumer countries. Hence the global price of oil increased from 1.21 U.S. dollars in December 1970 to 1.64 U.S. dollars in January 1971. Again, in July of 1971 the price of oil increased by 10 cents from 1.64 U.S. dollars to 1.74 U.S. dollars.

Every 6 months, from middle of 1971 until May 1973, the price of oil increased by 10 cents. However, in July 1973 it increased by 35 cents from 2.35 to 2.7 U.S. dollars. In October of the same year the price increased from 2.7 to 4.1 U.S. dollars.

However, comparing to price shock of December 1973-January 1974, the price increase of October 1973 is relatively moderate. In December 1973, the OPEC members had a meeting in Isfahan, Iran. Jamshid Amouzegar was Iran's representative in the meeting. He was asked by the Shah to use Iran's power in OPEC for a significant increase in oil price. However, even before the OPEC meeting was finished, the Shah of Iran announced that oil price has been raised in the OPEC meeting. The new global price of oil in January 1974 was \$13.0 U.S. dollars.

Note, that the price of oil increased again in 1979, but after a few years it came down and for over two decades stayed almost at the same level that it was in 1974. Again, Iran had a big role in price increase of 1979. In February 1979 Islamic Revolution happened in Iran and Shah lost his power. For a few years prior to 1979, Iran was one of the largest oil producers on Earth. However, over the same period, demonstrations against Shah were on rise. In 1978 and 1979 the workers of oil industry in Iran joined the demonstrators and stopped going to work. Therefore, the oil industry in Iran stopped functioning and oil production decreased significantly which was followed by an increase in oil price.

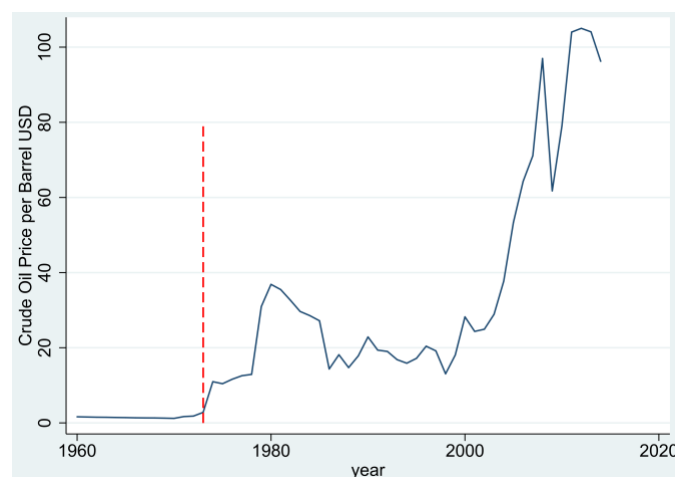


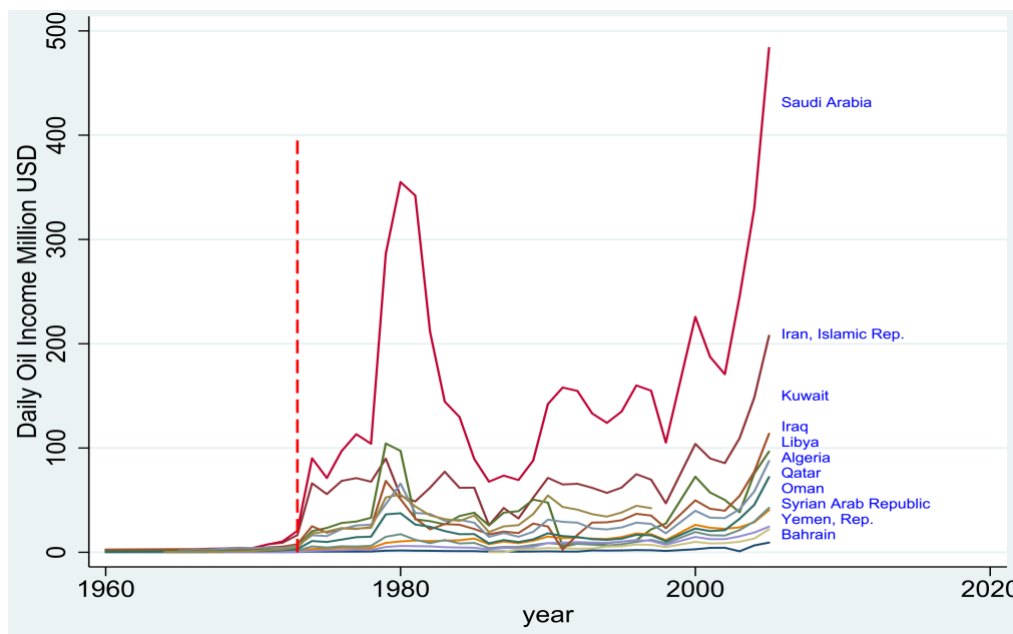
Figure 1: The global oil price trend

Another important event that must be considered is the famous "Embargo". The oil embargo began in October 1973 when Arab Nations decided to decrease their oil exports to nations they believed to be supporters of Israel. Some of targeted countries include Canada, Japan, the Netherlands, the United Kingdom, the United States, and Portugal. When the oil embargo started in October 1973, the price of oil was less than 3.0 U.S. dollars, but when it ended in March 1974 the price was 13.0 U.S. dollars. Because the oil embargo and price shock of 1973-1974

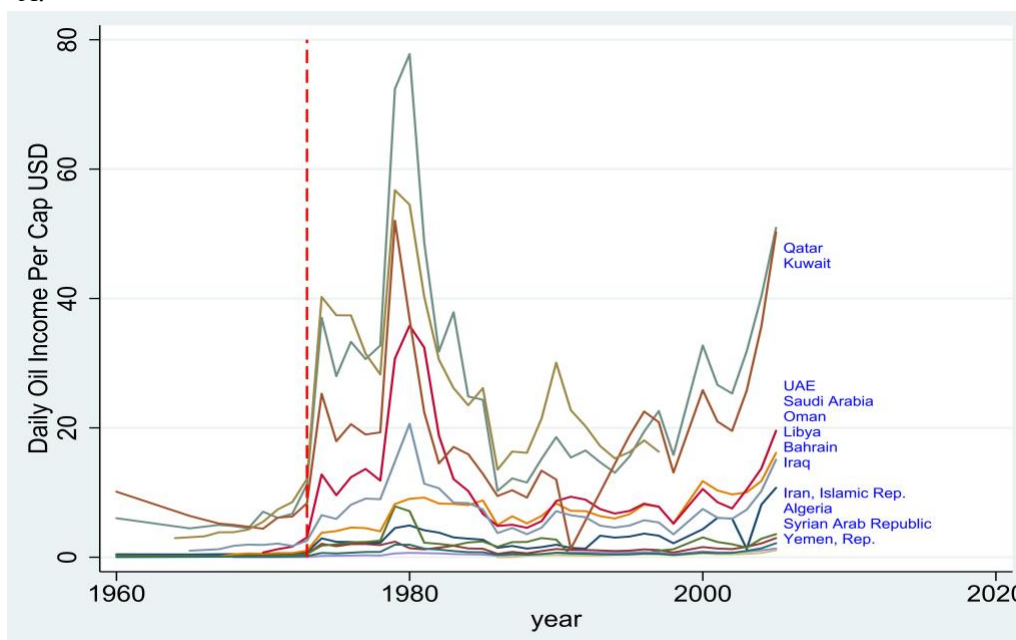
⁵ Seven Sisters is a term for an oligopoly consisted of seven transnational oil companies of the "Consortium for Iran". The seven sisters include: 1. Anglo-Iranian (started as Anglo-Persian Oil Company. Now British Petroleum). 2. Standard Oil Company of California (Now Chevron). 3. Gulf Oil (later part of Chevron). 4. Royal Dutch Shell. 5. Standard Oil Company of New Jersey (Esso, later Exxon, now part of ExxonMobil). 6. Standard Oil Company of New York (Socony, later Mobil, now part of ExxonMobil). 7. Texaco

coincided many believed that oil embargo caused the price increase, but as discussed above in fact Shah of Iran was behind the price increase. The western media constantly blamed the Shah for the price increase of 1973-1974.

After 1973 the oil income of the oil producing nations significantly increased. Figure 2.A shows daily oil revenue of the oil producing nations (i.e. the treated countries) in million U.S. dollars. As the figure shows, the real increase in oil income started in January 1974 and among Middle Eastern and North African countries, Saudi Arabia and Iran earned the highest oil incomes after the price increase. Figure 2.B represents daily oil income per capita of the treated countries in U.S dollars. As with daily oil income, daily oil income per head drastically increased after 1973. Qatar, Kuwait, and United Arab Emirates that have smaller populations earned the highest levels of oil revenue per head. The most striking feature of Figure 2.A and 2.B is the large increase in the oil income of the treated countries after 1973.



A.



B.

Figure 2: A. Daily oil income of the treated countries in million U.S. dollars. B. Daily oil income per capita in the treated countries in U.S dollars.

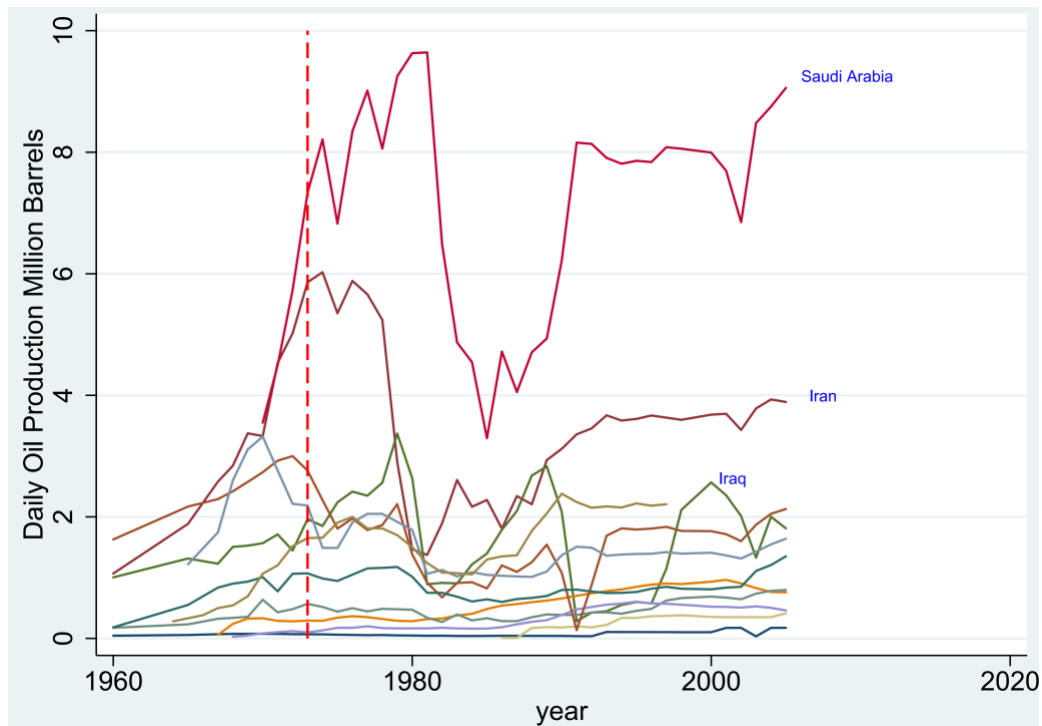


Figure 3: Daily oil production of the treated countries- million barrels

Figure 3 shows the oil production level of the treated countries in million barrels. Saudi Arabia and Iran that significantly increased their production level in the early 1970s, kept increasing it until 1975. In 1975 they both decreased their production levels to some extent which is much less than their increase in production from 1970 until 1975. Usually, the rest of the countries have been producing less oil than Saudi Arabia and Iran.

The summary statistics of the main variables of the study are represented in Table 1. In each cell three numbers are provided. The first number on top is the mean of each variable over the research period which is from 1960 to 2005. The second number in each cell which is provided in parentheses is the standard deviation and third number in the brackets represents the number of years which the mean and standard deviation of each variable are calculated for. For example, the mean of infant mortality for Algeria over the period of this research which is 55 years (from 1960 to 2014) had 76.552 per 1,000 live births with a standard deviation of 50.828. Even though for most of the variables the data is complete (i.e. the data is available for all 55 years of the study) for some of the variables we have some missing values. That is the reason why the number of observations for some variables is less than 55.

We use four common measures of mortality rates: the infant mortality rate, the mortality rate under age five, the adult female mortality rate, and the adult male mortality rate. The reason for using four measures of mortality is that the effects of oil revenues may differ differently across age groups.

The infant mortality rate is the number of deaths of children under age one per 1,000 live births. The mortality rate for under age five is deaths of children under age five per 1,000 live births. The World Bank defines the female (male) adult mortality rates as the probability that those females (males) who have reached age 15 die before reaching age 60. The rates are per 1,000 females (males).

Figure 4 displays the mortality rates used in this paper. Summary statistics are provided in Table 1. Figure 4 is very helpful in understanding the impacts of conflicts that affected mortality rates in the Middle East and North Africa. The most devastating war of the region was an eight-year war between Iran and Iraq from 1980 until 1988. The number of the Iranians killed in the war was very high. According to the data from the World Bank, over 500 thousand people died from both sides combined, most of whom were young males. The numbers do not

show a considerable increase in mortality rate of females or children for any of the countries during the war. Another war was the Iraq War from March 2003 until December 2011. As can be seen from the graph, this war also contributed to an increase in mortality rate of adult males. Yet, a third conflict in the Middle East and North Africa began in 2011 which is famous as Arab Spring. In 2011 demonstrations began in Arab countries followed by changes in the political systems of some countries. In countries such as Syria the Arab Spring followed by ongoing conflicts that significantly increased mortality rates.

Note that as the table shows mortality rates were usually lowest in countries with small populations, and high GDP and oil revenues per head. Another interesting point is that mortality rates of the treated countries and the control countries are not too different. However, the average of GDP per capita in the treated nations is much higher than that of the control units.

Table 1: Summary statistics

	Infant mortality ^a	Mortality under age 5 ^b	Adult mortality female ^c	Adult mortality male ^d	GDP per capita ^e	Daily oil income per head ^f	Oil production ^g	Population (millions)
Algeria	76.552 (50.828) [55]	114.7 (90.357) [55]	191.815 (80.312) [55]	239.147 (82.567) [55]	2731.918 (564.704) [51]	0.656 (0.525) [39]	848.543 (218.606) [39]	23.950 (8.559) [55]
Bahrain	33.849 (32.889) [55]	45.109 (48.897) [55]	116.496 (47.752) [55]	156.541 (70.607) [55]	4237.641 (613.277) [51]	2.724 (2.197) [40]	74.147 (40.565) [40]	0.540 (0.353) [55]
Iran	50.584 (933.024) [55]	68.686 (50.293) [55]	210.315 (97.752) [55]	287.096 (123.036) [55]	4307.478 (1178.294) [55]	1.149 (0.706) [40]	3418.715 (1284.591) [40]	49.409 (18.471) [55]
Iraq	56.276 (27.857) [55]	76.325 (43.366) [55]	201.844 (80.380) [55]	266.796 (64.062) [55]	2857.168 (1543.254) [51]	1.787 (1.681) [40]	1642.842 (757.365) [40]	17.902 (8.003) [55]
Kuwait	30.516 (25.798) [55]	39.865 (37.229) [55]	98.092 (33.836) [55]	144.827 (41.556) [55]	15353.25 (7460.969) [51]	17.281 (11.740) [37]	1726.967 (649.161) [40]	1.629 (0.889) [52]
Libya	56.372 (42.293) [55]	79 (71.735) [55]	176.291 (75.897) [55]	233.701 (75.734) [55]	4343.924 (2156.769) [49]	6.240 (3.941) [20]	1601.439 (575.625) [38]	3.958 (1.618) [55]
Oman	66.119 (63.769) [55]	94.334 (97.212) [55]	185.221 (93.044) [55]	242.024 (95.162) [55]	5616.712 (2548.245) [55]	6.322 (3.686) [38]	543.918 (256.252) [38]	1.693 (0.923) [55]
Qatar	20.841 (13.347) [55]	25.543 (17.582) [55]	91.439 (33.394) [55]	124.339 (40.571) [55]	19353.93 (11838.27) [51]	23.599 (17.242) [40]	460.317 (153.209) [40]	0.546 (0.566) [55]
Saudi Arabia	41.360 (29.280) [43]	55.141 (43.577) [43]	168.055 (82.075) [55]	213.859 (101.162) [55]	9063.92 (2414.286) [51]	10.675 (8.152) [35]	7045.714 (1836.274) [35]	15.062 (8.433) [55]
Syria	44.949 (31.214) [55]	60.5 (46.846) [55]	168.436 (77.840) [55]	212.238 (51.255) [55]	5776.062 (1530.089) [50]	0.502 (0.323) [37]	306.440 (191.489) [37]	11.928 (5.206) [55]
UAE	36.545 (38.057) [55]	49.738 (56.705) [55]	134.962 (58.079) [55]	172.802 (72.505) [55]	19053.39 (6015.65) [51]	21.450 (14.186) [33]	1522.091 (598.432) [33]	2.453 (2.672) [55]
Yemen	121.278 (72.707) [52]	176.111 (110.899) [52]	295.395 (83.139) [55]	349.081 (88.685) [55]	2178.319 (692.059) [55]	.391 (0.232) [19]	269.452 (122.244) [19]	12.648 (16.643) [55]
All countries	54.080 (46.257) [975]	74.889 (71.470) [975]	172.203 (90.181) [1,020]	222.974 (97.474) [1,020]	6648.051 (6653.095) [999]	7.845 (11.329) [436]	1641.967 (1983.831) [439]	12.414 (16.441) [1,024]
Treated countries	53.273 (48.723) [622]	74.308 (75.729) [622]	169.863 (90.383) [660]	220.204 (99.813) [660]	7869.167 (7612.76) [617]	7.845 (11.329) [436]	1641.967 (1983.831) [439]	11.856 (15.414) [675]
Control Countries	55.501 (41.585) [353]	75.914 (63.362) [353]	176.493 (89.777) [360]	228.052 (92.954) [360]	4675.725 (3991.258) [382]	0	0	13.364 (18.041) [385]

Notes: The first number in each cell is the mean. The numbers in the parentheses represent standard deviations and the ones in the brackets are sample counts.

- a. Infant mortality (per 1,000 live births)
- b. Mortality under age 5 (per 1,000 live births)
- c. Adult mortality-female (per 1,000 female adults)
- d. Adult mortality-male (per 1,000 male adults)
- e. Real GDP per capita in 2011 US dollars
- f. The average of oil income of the country per head per day in nominal US dollars
- g. Oil production (1000 barrels per day)

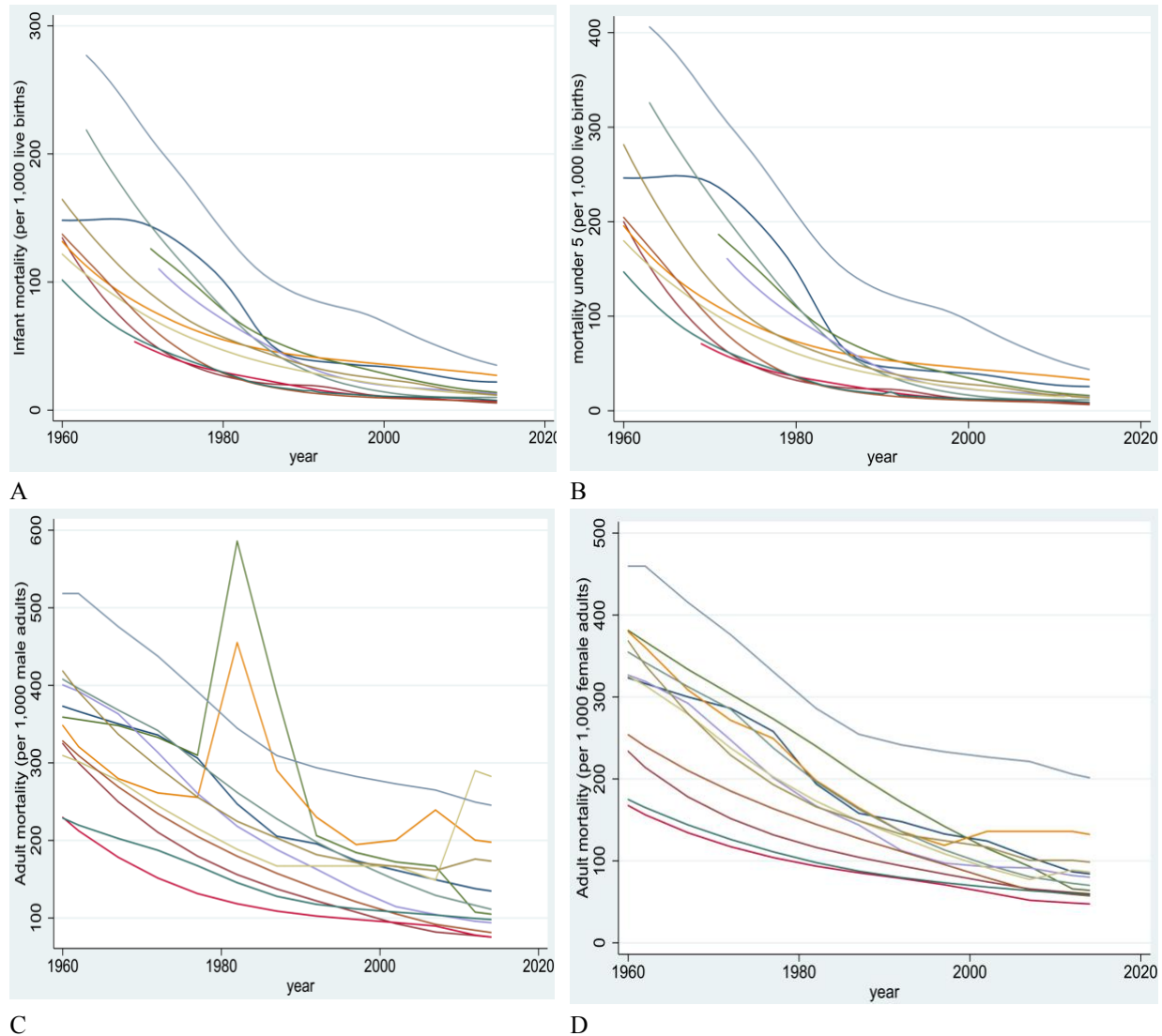


Figure 4: Mortality rates: A. Infant mortality (per 1,000 live births). B. Mortality under age 5 (per 1,000 live births). C. Adult mortality-male (per 1,000 male adults). D. Adult mortality-female (per 1,000 female adults)

Table 2 reports the mean, standard deviation, and number of observations for the treated nations before 1973 and after 1973. The child mortality rate for both groups of the countries has decreased over time. However, the important point is that child mortality rate, including both infant mortality and mortality under age 5, before the event has been more in the treated countries comparing to the control group, but it has been less after the event. The data in Table 2 does not show an improvement in mortality rates of the adults after the treatment comparing with those of the control countries. GDP per capita of the treated nations is more than that of the control group before and after the event, but the difference between the treated and control group has decreased after the event. Note the numbers in Table 2 show the average of the data for each variable over a period of time. This Table only provides some hints about the impact of the oil shock, but the impacts have been estimated and are reported in the next section.

Table 2: Summary statistics treated versus control group before and after the event

	1960-1973		1974-2014	
	Treated	Control	Treated	Control
Infant mortality rate ^a	116.257 (52.895) [130]	106.819 (39.400) [68]	36.631 (30.652) [492]	43.257 (31.562) [285]
Mortality rate under age 5 ^b	173.187 (84.126) [130]	158.770 (64.904) [68]	48.181 (46.058) [492]	56.145 (44.116) [285]
Adult mortality rate, female ^c	269.812 (84.426) [168]	272.543 (70.571) [86]	135.735 (62.887) [492]	146.346 (72.318) [274]
Adult mortality rate, male ^d	312.352 (81.908) [168]	327.391 (98.374) [86]	188.739 (84.808) [492]	196.873 (76.305) [274]
GDP per capita ^e	9606.389 (11098.73) [168]	2880.831 (1831.396) [97]	7219.159 (5975.694) [492]	5286.618 (4331.566) [285]
Daily oil income per head ^f	2.261 (2.909) [88]	0	9.257 (12.202) [348]	0
Oil production ^g	1456.367 (1515.359) [88]	0	1688.499 (2084.1) [351]	0
population (Millions)	5.721 (7.423) [168]	8.293 (10.898) [98]	13.964 (16.827) [489]	15.096 (19.619) [287]

Notes: The first number in each cell is the mean. The numbers in the parentheses represent standard deviations and the ones in the brackets are sample counts.

- Infant mortality (per 1,000 live births)
- Mortality under age 5 (per 1,000 live births)
- Adult mortality-female (per 1,000 female adults)
- Adult mortality-male (per 1,000 male adults)
- Real GDP per capita in 2011 US dollars
- The average of oil income of the country per head per day in nominal US dollars
- Oil production (1000 barrels per day)

4. Empirical Results

4.1. Difference-In-Differences

Table 3 represents the results of difference-in-differences model (i.e. equation 1). Results for all countries in the data set are reported in column (1). In column (4) Iran and Iraq are dropped from the dataset for two reasons. The first reason goes back to the possibility of endogeneity of the treatment respect to the Iranian economy and the second reason is the Iran-Iraq war from 1980 to 1988 which increased mortality rates in both countries. In column (7), Syria and Algeria as well as Iran and Iraq are dropped from the dataset. Besides the Iran-Iraq war, another reason for dropping those countries is that they had the least oil revenue per capita in 1974 among all producing nations in the sample. By dropping them, we can see the impact of the oil price shock on the nations that income from oil has a bigger contribution to their economies. Note that even though Iran was one of the largest oil producers in the early 70s, but because it had a population of over 30 million people, its oil revenue per capita was less than most of the other oil-producing nations. In column (10), the dataset is limited to 1960-2010. In other words, years 2011 to 2014 are dropped. That is because of Arab Spring which affected Syria, Libya, and Yemen among the treated nations of the research and Tunisia among the countries of the control group. The two columns after columns (1), (4), (7), and (10) show the number of observations and R Squared relevant to DID estimations. All of the regressions contain country and year fixed effects. The equations are estimated with and without GDP per capita as a control variable.

As can be seen in the impacts of the 1973 oil price shock on all measures of mortality and GDP per capita are negative and statistically significant. The results show bigger impacts when GDP per capita is a control variable.

The results in the first row and column (1) show that the impact of the oil shock on infant mortality rate is negative 17.21 which means infant mortality decreased by 17.21 per 1000 live infants every year. In addition, in the same column the impact of the oil price shock on mortality rate of children under age 5, is 25.23 fewer deaths per 1000 live births. Also, the impact of the shock on adult female and adult male mortality rates are 1.86 and 16.07 (per 1000 adults) respectively. Note that the absolute value of the impact on adult male mortality is much larger than that of the adult female mortality. The reason for this difference goes back to the Iran-Iraq war where most of the victims were adult males. The impact of the oil price shock on mortality rates of adult males is much larger when Iran and Iraq are dropped.

Also, as mentioned before, the impact of the oil shock on log of GDP per capita is negative and statistically and economically significant. This result confirms the findings of the resource curse literature.

Table 3: Difference-in-differences results

<i>Dependent variable</i>	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	All countries	N	R2	All countries except Iran and Iraq	N	R2	No Syria, Algeria, Iraq, Iran	N	R2	Arab Spring & no Iran and Iraq	N	R2	Control variable: GDP PC
Infant mortality ^a	-17.218*** (2.823)	975	0.884	-20.156*** (2.963)	876	0.886	-23.067 (3.208)	766	0.884	-23.697*** (3.201)	706	0.890	
Mortality under age 5 ^b	-25.232*** (4.631)	975	0.869	-29.920*** (4.876)	876	0.871	-31.199*** (5.175)	766	0.870	-32.119*** (5.172)	706	0.878	
Adult mortality male ^c	-1.860*** (5.719)	1,020	0.864	-15.205*** (4.373)	910	0.922	-19.560*** (4.236)	800	0.938	-21.220*** (4.244)	744	0.939	
Adult mortality female ^d	-16.075*** (3.890)	1,020	0.926	-10.087*** (3.979)	910	0.927	-4.808 (4.328)	800	0.924	-6.038*** (4.403)	744	0.923	
Infant mortality ^a	-25.987*** (2.767)	929	0.898	-29.467*** (2.893)	838	0.901	-36.977*** (3.105)	737	0.905	-36.207*** (3.055)	701	0.911	Y
Mortality under age 5 ^b	-40.065*** (4.502)	929	0.887	-46.058*** (4.716)	838	0.891	-54.080*** (4.981)	737	0.895	-52.801*** (4.901)	701	0.902	Y
Adult mortality male ^c	-13.193*** (5.502)	974	0.882	-30.953*** (3.747)	872	0.947	-39.024*** (3.923)	771	0.952	-38.332*** (3.966)	739	0.952	Y
Adult mortality female ^d	-30.302*** (3.487)	974	0.945	-26.050*** (3.620)	872	0.944	-24.717 (4.053)	771	0.941	-23.885*** (4.105)	739	0.940	Y
Log GDP pc ^e	-0.349*** (0.054)	999	0.808	-0.324*** (0.055)	897	0.826	-0.425*** (0.059)	796	0.827	-0.429*** (0.060)	760	0.825	

Notes: All regressions include country and region-year fixed effects. The numbers in parentheses represent standard errors.

- Infant mortality (per 1,000 live births)
- Mortality under age 5 (per 1,000 live births)
- Adult mortality-male (per 1,000 male adults)
- Adult mortality-female (per 1,000 female adults)
- Logarithm of real GDP per capita in 2011 US dollars

* Significant at 10%

** Significant at 5%

*** Significant at 1%

4.2. Robustness Check

One concern is that because of the increase in price of oil in 1979 the parallel trend assumption might not hold. Therefore, the analysis is repeated using observations for 1960-1978. The impacts of the 1973 oil price shock on mortality rates that are reported in Table 4 are, to a high extent, similar to the results in Table 3 Even though the size of the dataset is smaller in Table 4 (only five years) the coefficients are not too different from those of the complete dataset in Table 3.

However, in Table 4 the coefficient of Log of GDP per capita is not statistically significant. Perhaps, the reason is that resource curse (the negative impacts of natural resource revenues on economic growth) does not happen as fast as five years after an increase in oil revenues. Note that the reason that Israel has been dropped in the

second series of the estimation in Table 4 is that that Israel has a more advanced economy as compared to the countries in the treated group or the ones of control group. Dropping Israel has a very marginal impact on the size of the coefficients without any impact on their signs.

Table 4: Robustness check; difference-in-differences estimations. 1960-1978

<i>Dependent variable</i>	All countries	N	R2	All countries except Israel	N	R2	All countries except Iran	N	R2	Control variable: GDP PC
Infant mortality ^a	-15.457*** (4.245)	291	0.957	-15.457*** (3.108)	286	0.955	-15.437*** (3.150)	283	0.957	
Mortality under age 5 ^b	-23.696*** (4.849)	291	0.958	-23.696*** (4.883)	286	0.957	-23.637*** (4.950)	283	0.958	
Adult mortality male ^c	-0.564 (4.235)	344	0.961	-0.564 (4.178)	342	0.962	-3.840 (4.101)	325	0.966	
Adult mortality female ^d	-6.520* (3.584)	344	0.973	-6.520* (3.550)	342	0.973	-6.541* (3.749)	325	0.972	
Infant mortality ^a	-16.546*** (3.024)	290	0.959	-16.548*** (3.050)	285	0.957	-16.664*** (3.095)	282	0.959	Y
Mortality under age 5 ^b	-25.719*** (4.687)	290	0.962	-25.724*** (4.719)	285	0.960	-25.926*** (4.789)	282	0.962	Y
Adult mortality male ^c	-0.361 (4.205)	343	0.962	-0.322 (4.141)	341	0.963	-3.845 (4.033)	324	0.968	Y
Adult mortality female ^d	-6.198* (3.520)	343	0.974	-6.169* (3.479)	341	0.974	-6.490* (3.680)	324	0.973	Y
Log GDP pc ^e	0.062 (0.054)	360	0.957	0.086 (0.056)	341	0.956	0.036 (0.053)	341	0.958	

Notes: All regressions include country and region-year fixed effects. The number in parenthesis represent standard errors.

- Infant mortality (per 1,000 live births)
- Mortality under age 5 (per 1,000 live births)
- Adult mortality-male (per 1,000 male adults)
- Adult mortality-female (per 1,000 female adults)
- Logarithm of real GDP per capita in 2011 US dollars

- * Significant at 10%
 ** Significant at 5%
 *** Significant at 1%

Because the price of oil started to increase in 1970, 1970 might be the year that should be considered as the event year. Hence, the results reported in Table 5 use the event year of 1970. As can be observed, the results are similar to the ones in Table 3 In most cases, the impacts of the oil shock on child and adult mortality rates is negative and statistically significant. Again, the impact of the oil shock on per capita GDP is negative and statistically significant. However, the impact on income is smaller when the event year is 1970 rather than 1973.

Table 5: Robustness Check; difference-in-differences estimations. Event year 1970

<i>Dependent variable</i>	All countries	N	R2	All countries except Israel	N	R2	All countries except Iran and Iraq	N	R2	Arab Spring	N	R2	Control variable: GDP PC
Infant mortality ^a	-19.303*** (3.123)	975	0.884	-19.303*** (3.137)	934	0.883	-22.790*** (3.268)	876	0.887	-23.232*** (2.261)	808	0.892	
Mortality under age 5 ^b	-28.798*** (5.120)	975	0.869	-28.798*** (5.147)	934	0.869	-34.445*** (5.375)	876	0.872	-35.083*** (5.372)	808	0.878	
Adult mortality male ^c	-2.050 (6.217)	1,020	0.864	1.243 (6.320)	990	0.861	-15.268*** (4.760)	910	0.922	-17.906*** (4.385)	846	0.934	
Adult mortality female ^d	-16.229*** (4.234)	1,020	0.926	-13.404*** (4.282)	990	0.925	-10.286*** (4.328)	910	0.927	-11.095*** (4.382)	846	0.926	
Infant mortality ^a	-26.373***	929	0.896	-27.674***	888	0.901	-30.116***	838	0.900	-29.309***	802	0.905	Y

Mortality under age 5 ^b	(3.042) -40.707*** (4.945)	929	0.886	(2.973) -42.804*** (4.831)	888	0.892	(3.169) -46.866*** (5.161)	838	0.889	(3.121) -45.578*** (5.089)	802	0.895	Y
Adult mortality male ^c	-11.373 (5.911)	974	0.882	-8.054 (5.959)	944	0.881	-27.960*** (4.060)	872	0.946	-27.267*** (4.089)	840	0.946	Y
Adult mortality female ^d	-27.446*** (3.787)	974	0.943	-24.254*** (3.728)	944	0.945	-22.995*** (3.915)	872	0.943	-22.305*** (3.946)	840	0.943	Y
Log GDP pc ^h	-0.285*** (0.059)	999	0.805	-0.231*** (0.063)	944	0.792	-0.262*** (0.060)	897	0.822	-0.264*** (0.061)	861	0.820	

Notes: All regressions include country and region-year fixed effects. The number in parenthesis represent standard errors.

- Infant mortality (per 1,000 live births)
- Mortality under age 5 (per 1,000 live births)
- Adult mortality-female (per 1,000 female adults)
- Adult mortality-male (per 1,000 male adults)
- Logarithm of real GDP per capita in 2011 US dollars

* Significant at 10%

** Significant at 5%

*** Significant at 1%

4.3. Impact on Hospital Beds

The findings of this paper to this point are highly puzzling. Our results show that the oil shock in 1973 had a negative impact on GDP per capita, but improved mortality rates (i.e. decreased mortality). In this section we try to identify the plausible channel through which the windfall revenue from the oil decreased mortality⁶. Here we have estimated the impacts of the oil shock in 1973 on the number of hospital beds per head. Figure 5 that is provided in Appendix A shows the number of hospital beds per head in each country over the period of the research (i.e. 1960-2014).

As the table shows, the effect of the oil price shock on the number of hospital beds is positive and economically and statistically significant. Assuming that means that the health sector has been growing after the oil shock, then Dutch Disease hypothesis can provide us with a plausible channel that the oil shock could have improved the mortality rate despite its negative impact on economic growth.

One prediction of Dutch Disease is that if the oil sector employs a low ratio of workers of the whole economy (which in practice is the case in any economy), then the spending effect (i.e. increase in aggregate demand in the services sector because of the oil price shock) dominates the resource movement effect (i.e. movement of labor and capital from agriculture and manufacturing sectors to the oil sector because of the oil price shock) which leads to an increase in output and employment in services sector (such as health sector)⁷.

Table 6: difference-in-differences estimations: impacts of oil shock on hospital beds

All countries	N	R2	All countries except Iran and Iraq	N	R2	Arab Spring	N	R2	Control variable: GDP PC
0.828*** (0.260)	325	0.673	0.713*** (0.288)	287	0.662	0.740** (0.312)	226	0.743	
1.595*** (0.256)	285	0.747	1.556*** (0.284)	255	0.739	1.565*** (0.294)	221	0.699	Y

Dependent variable: Number of hospital beds per person. All regressions include country and region-year fixed effects. The number in parenthesis represent standard errors.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

⁶ Note that other factors such as improvement in water and sanitations might take place after the windfall revenues take place. That also could affect mortality.

⁷ see the introduction for more details

4.4. Event studies

In this section we provide the event study estimations. Instead of the interactions of event and post in equation 1 we have used interactions of event and three-year dummy variables. This specification allows the treatment effect to vary over time. The three-year dummy variable that indicates 1971 to 1973 period (i.e. equals to one if year is 1971, 1972, or 1973 and equals to zero otherwise) has been omitted from the regression. The reason is that identification in this specification comes from comparing the outcome variables to the omitted 3-years period prior the event. Also, the associated estimations are provided in Table 7. As can be seen in the figure and the table, the coefficients are not significant prior to the oil shock in 1973. However, after a few years the significant coefficients appear. As the results show the impacts of the oil shock on mortality rates and economic growth are negative.

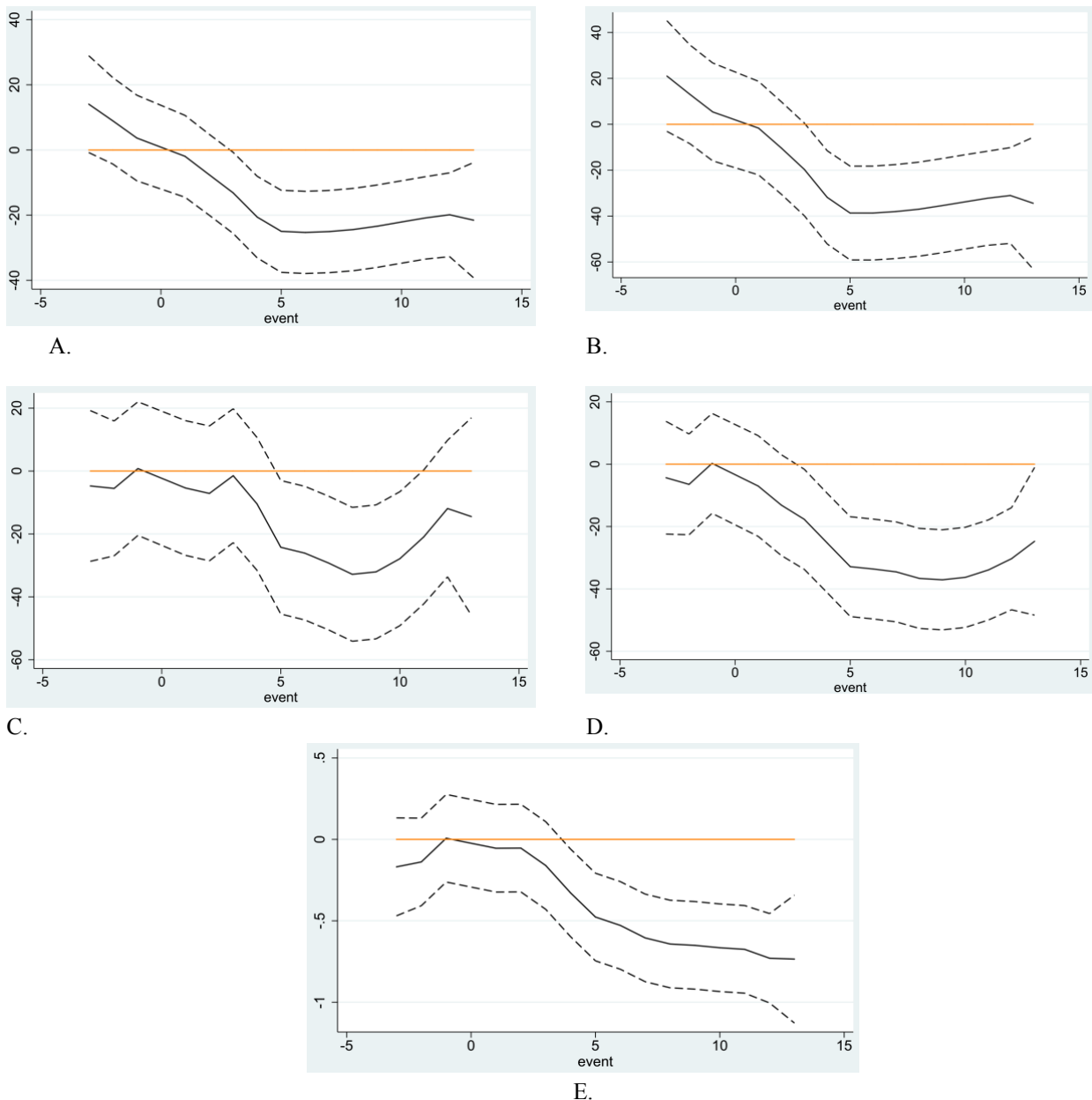


Figure 6: Event studies. A. Infant mortality, B. Mortality under age 5, C. Adult mortality male, D. Adult mortality female, E. GDP per capit

Notes: All regressions include country and region-year fixed effects. The numbers on horizontal axes show the associated event (see Table 7). The numbers on the vertical axes show the size of the coefficient (i.e. interaction of the event and 3-years dummy variables). Event is a dummy variable that equals to one if a country is one of the treated countries and it is equal to zero if the country is

Table 7: Event study estimations

Event	Event year	Infant mortality	Mortality under age 5	Adult male mortality	Adult female mortality	Log GDP pc
-3	1962 -1964	14.065* (7.566)	21.02* (12.281)	-4.735 (12.209)	-4.343 (9.205)	-0.168 (0.153)
-2	1965-1967	8.942 (6.752)	13.075 (10.960)	-5.524 (10.917)	-6.478 (8.231)	-0.138 (0.137)
-1	1968-1970	3.665 (6.694)	5.386 (10.856)	0.784 (10.820)	0.265 (8.158)	0.007 (0.137)
0	1971-1973	--	--	--	--	--
1	1974-1976	-1.936 (6.752)	-1.661 (10.382)	-5.399 (10.909)	-7.001 (8.225)	-0.054 (0.137)
2	1977-1979	-7.566 (6.322)	-10.375 (10.262)	-7.111 (10.916)	-13.094 (8.231)	-0.053 (0.137)
3	1980-1982	-13.158** (6.335)	-19.656* (10.283)	-1.475 (10.843)	-17.669** (8.176)	-0.160 (0.137)
4	1983-1985	-20.586*** (6.375)	-31.834*** (10.347)	-10.446 (10.753)	-25.290*** (8.108)	-0.328** (0.137)
5	1986-1988	-24.958*** (6.415)	-38.668*** (10.412)	-24.244** (10.811)	-32.864*** (8.151)	-0.476*** (0.137)
6	1989-1991	-25.301*** (6.421)	-38.678*** (10.422)	-26.082** (10.820)	-33.621*** (8.158)	-0.528*** (0.137)
7	1992-1994	-25.029*** (6.426)	-38.025*** (10.430)	-29.231*** (10.827)	-34.548*** (8.163)	-0.604*** (0.137)
8	1995-1997	-24.414*** (6.433)	-37.004*** (10.442)	-32.825*** (10.838)	-36.639*** (8.172)	-0.642*** (0.137)
9	1998-2000	-23.373*** (6.438)	-35.473 (10.450)	-32.055*** (10.845)	-37.075*** (8.177)	-0.650*** (0.137)
10	2001-2003	-22.098*** (6.439)	-33.827*** (10.451)	-27.860** (10.847)	-36.284*** (8.178)	-0.665*** (0.137)
11	2004-2006	-20.837*** (6.437)	-32.232*** (10.449)	-20.946* (10.844)	-33.908*** (8.176)	-0.675*** (0.137)
12	2007-2009	-19.879*** (6.549)	-31.029*** (10.630)	-11.914 (10.061)	-30.315*** (8.340)	-0.729*** (0.137)
13	2010-2012	-21.545** (9.018)	-34.409** (10.638)	-14.474 (10.996)	-24.730** (12.061)	-0.735*** (0.200)

All regressions include country and region-year fixed effects. The number in parenthesis represent standard errors. The interaction of event and the dummy variable that indicate years 1971 to 1973 is omitted.

* Significant at 10%

** Significant at 5%

*** Significant at 1%

4.5. Obtaining stationary residuals

Table 8 presents unit root tests results. The reason behind providing this table is that the sample in this paper includes fifty-five time periods and if the residuals of the regressions are not stationary then the findings might not be consistent. So, we do Fisher-type unit-root test on the residuals of the difference-in-differences regressions from the estimates of equation 1. Fisher-type unit-root test is based on Augmented Dickey-Fuller test methodology.

The null hypothesis here is that “All panels contain unit roots” and the alternative hypothesis is “At least one panel is stationary”. As can be seen in Table 8, for all of the estimations the null hypothesis is rejected at 1% significance level. In other words, we do not see any evidence that the residuals contain unit roots. Therefore, the findings of the difference-in-differences regressions should be consistent

Table 8: Fisher-type unit-root test based on Augmented Dickey-Fuller test

<i>Dependent variable</i>	All countries	Arab Spring & No Iran, No Iraq
Infant mortality	232.884***	160.399***
Mortality under age 5	245.853***	191.537***
Adult mortality male	85.014***	115.488***
Adult mortality female	127.839***	129.473***
Log GDP pc	99.490***	83.168***

Notes: The H0 and Ha hypotheses of Augmented Dickey-Fuller tests are as follow:

Ho: All panels contain unit roots

Ha: At least one panel is stationary

***: reject the null hypothesis at 1% significance level

**: reject the null hypothesis at 5% significance level

*: reject the null hypothesis at 10% significance level

5. Conclusion

The focus of this research is on studying the impacts of the oil price shock of December 1973 on the mortality rates of the oil producer nations. We have argued in the paper that the oil price shock in 1973 is an exogenous variable if not for the Iranian economy, but the rest of the world. We use longitudinal data from 1960 to 2014 and we apply difference-in-differences (DID) methodology to investigate our research questions. Our data covers the Middle East and North Africa region.

Key findings of this research can be summarized as follow:

The oil price increase of 1973 reduced mortality rates in the oil-producing nations of the Middle East and North Africa. The findings hold for all measures of mortality: infant mortality rate, mortality rate under age 5, and adult male and female mortality rates. Besides, the results show a negative impact of the oil price shock of 1973 on per capita GDP.

These findings are puzzling. Therefore, we have tried to find the plausible channel through which the oil price shock in 1973 has improved the health sector. We estimated the impact of the oil price shock on the number of hospital beds and we found a positive and statistically and economically significant impact on the number of hospital beds.

The results can be explained by the Dutch Disease hypothesis. According to the predictions of the Dutch Disease hypothesis if the oil sector hires a relatively low percentage of the population, then a boom in oil prices weakens the manufacturing and agriculture sectors and strengthens the services sector. Since the services sector includes the health sector and we have found negative impacts of the oil price shock on GDP per capita, (this could imply that the effect of the shock on manufacturing and agriculture has been negative⁸) the Dutch Disease's prediction might apply to the findings of our study.

The findings indicate that the impact of the oil price shock in 1973 on mortality rates in the Middle East and North Africa is negative but more research is needed to investigate the same research question applying to other contexts. Also, we do not know with confidence whether the findings of this research apply to the other oil-producing nations.

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⁸ GDP includes data from all sectors including, oil, manufacturing, agriculture, and services. A decline in GDP is not necessarily because of decline in production of agriculture and manufacturing.

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Appendix A: Hospital beds per head in treated countries

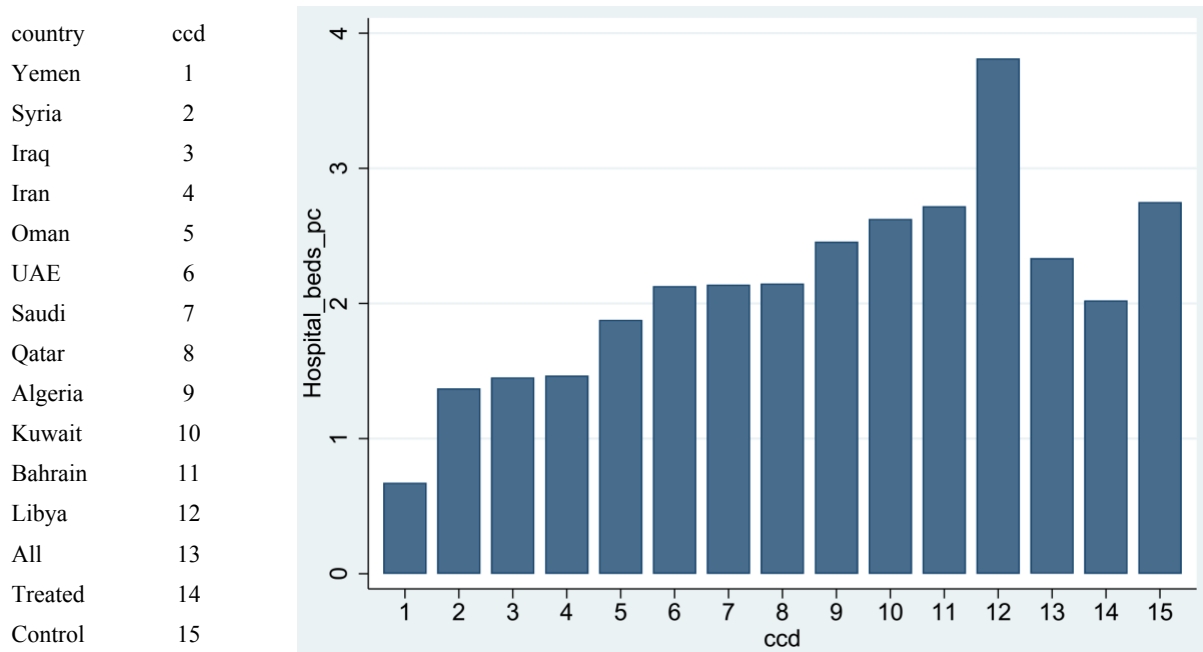


Figure 5: number of hospital beds per head in each treated country

The two columns in the left side of the figure show the country code (ccd) associated with each country.



Influence of Marketing Strategies on the Performance of SMEs: Evidence from Abuja SMEs

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Abstract

Marketing strategy has been an operational focus and a method for achieving an all-inclusive business success. The aim of this scholarly work was to determine the influence of marketing strategies on the performance of SMEs in Abuja. Specifically, the objectives selected to achieve the aim of the study were to examine the influence of promotion marketing strategy on the business performance, assess the impact of price marketing strategy on the business performance of SMEs, determine the influence of place marketing strategy on business performance of SMEs, evaluate the effect of product marketing strategy on the business performance of SMEs in Abuja. Sample size of 339 was drawn from a population of 2825 which comprised of all the SMEs in Abuja registered by SMEDAN. Regression analysis was used and results presented in tables and figures. The findings obtained revealed that the most adopted marketing strategy was product strategy which contributed the most to the model. There was a positive relationship between the study variables, (promotion, pricing, place and product strategies), implying that the application of marketing strategies positively influenced SME performance in Abuja. The research concluded that the performance of SMEs in Abuja was positively influenced by marketing strategies. Recommendations were made which stated that SMEs should produce quality products, charge equitable price, position suitably, and promote extensively to the final consumers.

Keywords: Marketing Strategies, Resource Advantage Theory, Resource-Based View, SME Performance

1. INTRODUCTION

Organizations including Small and Medium Enterprises (SMEs) have understood the necessity to establish strategies that will support them in gaining a comprehensive understanding of the market, specifically when it concerns their competitors and customers. Akindoju (2016) identified, financial constraints, management experience, leadership skills, marketing, planning, and education as the factors critical to small business success or failure. However, this study focuses on the marketing aspect of the success or failure. Marketing allows businesses to meet several customer needs through planning, implementation, and control of marketing promotions (O'Cass, Ngo, & Siahtiri, 2012). Dzisi and Ofofu (2014) noted that implementing sustainable marketing strategies are important factors that support SME performance and growth. It is on record that small businesses frequently lack marketing techniques and skills (e.g. Kozan & Akdeniz, 2014). Managers often mentioned poor market conditions resulting from (a) lack of market knowledge, (b) lack of marketing

techniques, (c) incomplete product development, and (d) product commercialization as contributing factors to poor market positioning (Hacioglu, Eren, Eren, & Celikkan, 2012).

At the far-reaching level, marketing strategy can be defined as an organization's incorporated array of decisions that stipulate its critical varieties regarding products, markets, marketing activities and marketing resources in the creation, communication and/or delivery of products that offer value to customers in exchanges with the organization and thereby allows the organization to achieve specific objectives (Varadarajan, 2010). Marketing strategies constitute one of the main efficient strategies that SMEs adopt to improve performance. The influence of marketing strategy in an organization dwells in the formulation of strategies to select the right customer, build relationships of trust with them and create a growth (Kariithi, 2015). Irrespective of the type and size, marketing strategies are very vital for all organizations. The main concern of any marketing strategy is customer's satisfaction.

Marketing strategy is the component of a marketing plan anticipated once an in-depth marketing research is conducted. It assists a firm to channel its resources which are typically scarce on the best possible task so as to improve their sales. In the contemporary business milieu, which is competitive prone, marketing can be perceived as an array of business activities structured to plan, produce, price, promote, distribute goods, service, and ideas for the satisfaction of applicable customers and clients (Dzisi & Ofosu 2014). This implies that in the distribution of products from the seller to the consumer, several marketing activities are involved in the chain of distribution. Marketing strategy is a vital criterion to an organization's knack for reinforcing its market share and minimizing the impact of the competition (Kenu 2019). Mohammadzadeh, Aarabi & Salamazadeh (2013) defined marketing strategy as a strategy focused on events regarding competitor and customer analysis, context analysis, segmentation, targeting, and outlining a suitable standing based on marketing mix. The marketing mix is an admixture of actions and decisions an organization makes to identify customer demands and to complete marketing objectives (Mohammadzadeh et al., 2013). Liu & Yang, (2014) stated how marketing strategies are among the foremost reasons for new product development and success. Azadi and Rahimzadeh (2012) suggested that the marketing mix consists of the combination of (a) product, (b) price, (c) place, and (d) promotion.

According to Azadi and Rahimzadeh, (2012), product is the production of goods or services delivered to the market to fulfil the needs of consumers; price is what the consumer spends to get the wanted product; place is the location of data and education about the behaviour of consumers; and promotion is the utilization of marketing, media support, and public relations to generate and uphold demand for the service or product. Similarly, Owomoyela, Oyeniya & Ola (2013) view marketing strategy as way of providing quality products that satisfies customer needs, offering reasonable prices and engaging in extensive distribution and backed with effective promotional strategy. According to the study conducted by Adewale, Adesola & Oyewale (2013) found that marketing strategies were expressively independent and positively influenced the business performance.

Azandi and Rahimzadeh concluded that the four market mix model is a useful instrument for devising marketing tactics and efficacy at the operating level. In the marketing strategy space, businesses need to outline the goals they want to attain through marketing efforts. As marketing strategy is a plan that identifies how these goals will be achieved. Therefore, strategy should address the following: product introduction or innovation, pricing, distribution, promotion, projected profitability, and sales or market share (Greene, 2011). It is equally vital that organization's marketing strategy be consistent with overall goals it has set for its business. Greene, (2011) stated how marketing goals should be written following the SMART guidelines (Specific-Measurable-Attainable-Realistic-Timely).

The importance of SMEs to several economies of the world has been discussed in various academic discourse (e.g. Magd and El Gharib, 2021; Akinboade & Kinfaek, 2012; Benneh Mensah & Nyadu-Ado, 2012). The SME sector occupies a central and strategic function in most economies around the world. (Makate, 2014) discussed how it is universally established that the SME sector has played a huge role in fast-tracking economic growth and achieving quick industrialization in most developing countries. It is a common knowledge that small businesses play vital role in everyone's life as much of our day to day economic activities are based on small

businesses. SMEs offer numerous services, professional practices and merchandisers filling immediate needs of their customers and clients, accordingly, small business contribute to the high quality of life that we enjoy (Gajanayake, 2010). Under an ideal settings, SMEs can be key components of flourishing, globally competitive industries, creating the large numbers of jobs needed to reduce poverty. Similarly, in a suitable business milieu, SMEs can grow into large firms, changing the game locally, carving their niche globally (IFC, 2011).

SMEs Performance

The word performance is vague, there is no consensus on fundamental terms, and there is no clear description and dimension to determine a company's performance, which further compounds the subject area for management researchers (Jogaratnam, Tse, & Olsen, 1999; Otley, 1999). Company success is a vital factor in business research (Rosenbusch, Rauch, & Unger, 2007). Performance has numerous names, including development (Dobbs & Hamilton, 2007; Wolff & Pett, 2006), survival, success and competitiveness (Eniola & Entebang 2015), as a multidimensional construct.

There is a lack of generality of view on the idea of what makes up business success, as success is seen primarily within the entrepreneur's subjective lens (Perez & Caninno; 2009, Ibrahim & Goodwin 1986). SME accomplishments have typically been divided into financial and non-financial elements (Efiom & Edet, 2018). Financial performance includes a wide range of metrics such as profits, sales, return on investment, etc., while non-financial measures for SMEs success include continuous business processes for a period of three years, personal engagement and autonomy, work-life balance (Efiom & Edet, 2018). Previous studies, such as Abdullahi & Sulaiman (2015), Bala & Mukhtar (2014), Akinruwa, Awolusi & Ibojo (2013), have concluded that there are multi-faceted determinants of SME performance/success in Nigeria. Performance generally can be defined as the ability of the firm to achieve satisfactory results and behaviour.

1.1 Problem Statement

Most research that investigated the effect of entrepreneurial marketing on small business success have been carried out in Nigeria generally. Others were conducted in other states of Nigeria (e.g. Yalo, Enimola & Nafiu, 2019 - in Kogi State; Olorunlambe, Abdulraheem & Salau, 2020 - in Kwara State; Ebitu 2016 - in Akwa Ibom). Other results of several research on the relationship between entrepreneurial marketing and the performance of small businesses in Nigeria seem to be mixed. Cases in point are: Shehu & Mahmood (2014) investigation which found a positive correlation between entrepreneurial marketing activities and the performance of small businesses. On the contrary Effiom and Edet (2018) found that Marketing practices have a negative and insignificant relationship with SMEs' profitability. Whereas Shehu (2014) findings showed that the relationship can be either positive or negative depending on the business climate, the nature and type of entrepreneurial marketing used, the environment of use, timing and timing. The inconsistent results indicate that it is still important to examine the influence of entrepreneurial marketing on SME success in Nigeria generally and FCT Abuja to be precise. Therefore, the study explored the influence of entrepreneurial marketing on SMEs performance in FCT Abuja.

1.2 Objectives of the Study

- i) To examine the influence of promotion marketing strategy on the business performance of SMEs in Abuja.
- ii) To assess the impact of price marketing strategy on the business performance of SMEs in Abuja
- iii) To determine the influence of place marketing strategy on business performance of SMEs in Abuja.
- iv). To evaluate the effect of product marketing strategy on the business performance of SMEs in Abuja.

2. LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

In the examining of the 4P's model of the marketing mix, Singh (2012) investigated the competitive benefits of business marketing. The findings was that for businesses to have a competitive advantage, managers must: (a) market the correct product to satisfy the demands of the target population; (b) offer the product at the correct

price; (c) notify prospective consumers of accessibility of the product, its place, and price; and (d) position the product in the correct location for consumers to purchase. Singh concluded that entrepreneurs could utilize the marketing mix as an effective method to achieve competitive advantage. Singh recommended that marketing managers become skilled in deciding marketing mix strategy by using the 4Ps as the marketing mix.

2.1 Theoretical Framework

2.1.1 Resource Advantage (R-A)

Resource Advantage (R-A) theory posits that a firm, by effectively leveraging its comparative advantage in resources to compete in the marketplace achieves competitive positional advantage (s), and thereby, superior financial performance. Hunt (2015) handles how the resource advantage (R-A) theory applies to Varadarajan's sixteen foundational premises for marketing strategy (2010). He points out that R-A theory and its three foundational methods, as well as the sixteen foundational assumptions of marketing strategy, work together to complement the strategic marketing field's theoretical foundations. In addition to offering understandings into the R-A theory supporting the foundational premises of marketing strategy, Hunt's scholarly work as well discovers how R-A theory clarifies the concerns described in Varadarajan's (2010) scholarly work as central to the field of strategic marketing. Hunt (2015) mostly concentrates on the R-A theory underpinnings of the foundational premises of marketing strategy that are advanced in Varadarajan (2010), he also reviews and comments on the domain of the field of strategic marketing and issues fundamental to strategic marketing.

2.1.2 Resource-Based View

The theory of resource-based view can be used to build competitiveness for strategic marketing. This theory suggests that the competitive advantage lies in the resources that a company can access and use, not in the capacity to control the environment (Campbell, 2004). The theory states that firms have three types of resources namely; tangible resources, intangible resources, and organizational capabilities. Tangible resources include financial, physical, technological and organizational assets and thus are easily identified. Conversely intangible resources are more complex to identify and therefore hard to imitate. They include strategies that an organization adopts over time and ends to better-quality performance (Barney, Caroline, & David, 2002). Lastly, organizational capabilities are skills and capabilities which an organization combines to transform tangible and intangible resources into outputs, for example, outstanding customer service (Dess, Lumpkin, & Eisner, 2007). It ensures that organizations are well endowed with an array of resources in the form of assets, know-how, processes, and substitutes that offer a competitive advantage to the company.

2.2 Empirical Review

2.2.1 Promotion Strategy and SME Performance

Promotion is an important practice that expedites the process of market exchange between stakeholders and the public at any given time. Consequently, every single establishment need to place itself as either a promoter or communicator with an intention of forming an ideal mix of marketing communication tools that will assist product to be a brand in the market. Promotion embraces a dominant role in the product marketing mix that any business may use to engage its marketing objectives and advertising, (Kotler, 2007).

In a scholarly work conducted by Francis and Collins-Dodd, (2004) showed that there is a relationship between promotion and the performance of business. In the same vein, Van Scheers and Radipere (2008) alluded that advertising can be used by SMEs, just like other large firms can result in giving SMEs competitive edge.

Also, in a study conducted by Sapuro 2016 on the effect of marketing strategies on performance of small and medium enterprises in Kitengela township, Kajiado county. The research adopted a descriptive research design. Census sampling method was used to select the SMEs, with the sampling size of 186 respondents. The study

results discovered that there was a significant relationship between promotional marketing strategies and SME performance.

Furthermore, in a study on the Factors influencing marketing strategy formulation for small and medium enterprises in Polokwane conducted by Phokwane (2020). The research used a quantitative approach to collect data from a sample of 412 SMEs in Polokwane using convenience and snowball sampling, which are non-probability sampling methods. Respondents were asked to fill out a survey questionnaire. The study's findings show that a marketing communications strategy for SMEs has a positive effect on their performance. As a consequence, the following hypothesis is proposed:

H1: Promotion strategy has a statistically significant influence on SME performance.

2.2.2 Pricing marketing strategy and SME Performance

Price is the cost of producing, distributing and promoting the product that is paid by the company, (Kotler 2007). One of the most powerful marketing techniques available to SMEs is the penetration pricing strategy. The pricing strategy involves setting a low entry price for a new product or brand in order to achieve a discovery in an extremely competitive market. The strategy may also be used when adding an entirely new product to the market or when tapping an existing product into a new market segment (Vikas, 2011).

Also, in a study conducted by Odhiambo (2013) on the impact of pricing as a competitive strategy on pharmaceutical companies' sales efficiency with a sample population of 15 businesses. The study's outcome found that pricing strategies significantly affect the performance of organization's sales. Price leadership as a marketing technique has a huge effect on organizational efficiency.

Furthermore, various scholarly works have proven that price has a significant relationship on business performance (e.g. Colpan, 2006; Owomoyela et al, 2013). A study stated that of all the facets of the marketing mix, price is the only strategy, which generates sales revenue, all other strategies create costs (Wawira 2016).

In another study carried out by Owomoyela, Oyeniya, & Ola (2013) established a significant relationship between price and business performance. The price you set for your product or service plays a large role in its marketability. Additionally, Gbolagade, Adesola & Oyewale (2013) study also specified that price consideration has a significant positive impact on business performance.

These contributions lead to the following hypothesis

H2: Pricing strategy has a statistically significant influence on SME performance.

2.2.3 Place marketing strategy and SME Performance

Louter, Ouwerkerk and Bakker, (1991) discussed how distribution strategy has a positive impact on firm performance. Also, Wolok, Mandey, & Kojo (2015) conducted a research on the effect of distribution channel sales volume in Pt.Varia Indah Paramitha Manado. Results discovered that distribution channels had a positive and significant impact on sales volume.

Furthermore, Schoviah (2012) carried out a study on the effect of marketing distribution channel strategies on a firm's performance among commercial Banks in Kenya. The study employed a descriptive survey research design. A target population of was 43 commercial banks operating in Kenya was employed. The study's outcomes showed that marketing distribution strategies increased sales, market share and profits.

In addition, Laswai (2013) carried out a study entitled "assessment of the effectiveness of channels of distribution models in the sales performance of an organization." The sample size of the study was 90 respondents. The study employed mixed methods to collect data. The findings of the study discovered that distribution channel has a positive influence on sales performance.

Additionally, Ferri, Mohd, Radia and Hamidreza (2012) conducted a research on impact of distribution channel innovation on the performance of SMEs. The outcomes disclosed that innovation in assortment; information sharing and transportation coordination had positive and significant relationships with firm performance. Likewise, Nguyen, McCracken, Casavant, and Jessup (2011) carried on a research on geographic location, ownership and profitability of Washington log trucking companies. The study utilized data from an extensive 2007 log trucking survey. The results showed that ownership and geographic location has a significant influence on profitability of the log trucking firm.

Equally, Eze, Odigbo and Ufot (2015) whose research is on the correlation between the business location and consumer's patronage showed that business location has a significant effect on sales performance. Thus the above-mentioned contributions lead to the following hypotheses:

H3: Place strategy has a statistically significant influence on SME performance.

2.2.4 Product marketing strategy and SME Performance

In a study carried on by Ngendahayo, (2019) entitled Marketing strategies and sales performance of manufacturing firm in Uganda: a case study of Tembo steels Uganda Ltd. One of the study's objectives was to establish the relationship between product development strategy and sales performance of Tembo Steels Uganda Limited. The study employed a case study design where a total of 68 sampled respondents took part in the research. Furthermore, a simple random, Stratified and Purposive sampling techniques were used as sampling techniques in the selection process of the respondents. Mixed methods data collection approach was employed. Also, descriptive and inferential statistics were used to analyze the data. The study concluded that product quality has a positive impact on sales performance.

In addition, Kisaka (2012) conducted a study on the relationship between marketing strategies and the performance of savings and credit societies in Mombasa district. A descriptive research design was used to assess the effects of the marketing strategies on the performance of savings and credit cooperative society (SACCOs). A sampling technique of census population of 84 respondents was employed for the study. The results of the study disclosed a causal relationship between marketing strategies and the performance of SACCOs where most of these organizations pursue strategies like product differentiation, niche marketing as they pursue to be perceived as the cheapest in the markets in terms of cost.

Furthermore, the findings of another study conducted by Omotayo and Adegbuyi (2015) discovered that institutionalizing proper product development strategy improves brand awareness and creates a significant positive effect on sales performance.

Additionally, in the Nigerian context, a study carried on by Ebitu (2016) entitled Marketing strategies and the performance of enterprises in Akwa-Ibom State, Nigeria showed a significant impact of product quality strategy and relationship marketing strategy on the profitability and increased market share of SMEs in Akwa Ibom State.

Moreover, in a study entitled Marketing strategies of commercial fish farming under economic stimulus programme in Kenya: an empirical study of Kitui County conducted by Mutambuki and Orwa (2014) showed that product branding strategy has an influence on commercial fish farming. Thus the hypothesized relationship between product strategy and SME performance is as follows:

H4: Product strategy has a statistically significant influence on SME performance.

3. RESEARCH METHODOLOGY

The study was carried out in FCT Abuja. FCT Abuja is located in the North-Central geo-political zone of Nigeria. It also serves as the seat of political power. According to SMEDAN, (2017) there are 2825 small and medium scale enterprises in FCT Abuja. Thus, 339 sample size was drawn from the population of SMEs in FCT Abuja using Raosoft sample size calculator (<http://www.raosoft.com>). This study employed the survey research design and the simple random sampling procedure. The statistical tool employed in this study is the regression

analysis using SPSS version 22 as the analytical software. The statistical analysis focuses on inferential statistics only.

4. RESULTS AND DISCUSSION

4.1 Multiple Regression Analysis

Multiple regression is used when we want the value of a variable to be predicted based on the value of two or more other variables.

4.1.1 Assumptions for Regression Analysis

There are several vital assumptions for multiple regression that must be met prior to embarking on regression analysis. This study's assumptions to be tested include normality, linearity, multicollinearity and homoscedasticity

4.1.1.1 Normality

Tabachnick and Fidell (2014) stated that one of the fundamental principles of regression analysis is that the variable is typically distributed between each variable and all linear groupings. Typically, normality is measured by either statistical or graphical methods. Skewness and kurtosis are the fundamental processes of statistical normality. When the distribution is normal, the value should be close to zero for both skewness and kurtosis. Normality is typically calculated by residual histogram plots in the graphical method. This refers to the shape of data distribution and its correspondence with normal distribution to an individual continuous variable. If the assumption is satisfied, the residuals should be distributed normally and independently (Tabachnick & Fidell, 2014). Normality in this study was assessed by the Normality Histogram as shown below in Figure 1.

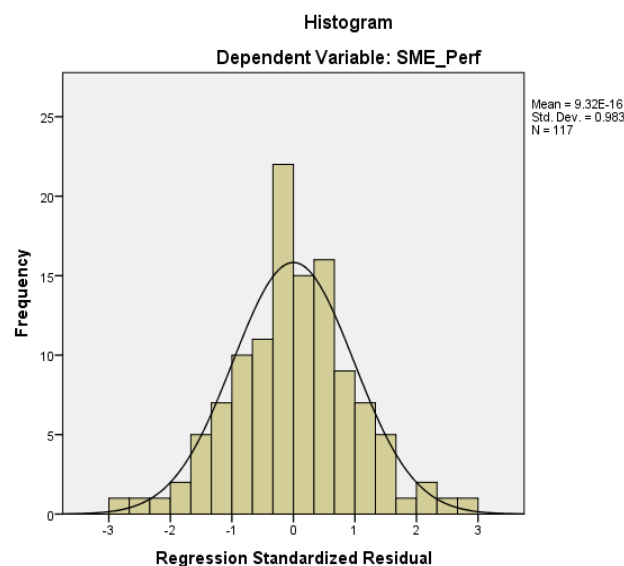


Figure 1: Normality Histogram

4.1.1.2 Multicollinearity

Multicollinearity was defined by Sekaran and Bougie (2010) as a phenomenon in which two or more independent variables are extremely correlated in a multiple regression model. The multiple regression approach suggests that there is no perfect linear relationship between any independent or explanatory variable (Tabachnick & Fidell, 2014). Testing the correlation matrix of the independent variables is the easiest way of detecting multicollinearity. The correlation of 0.7 and above is considered strong by most individuals (Sekaran and Bougie, 2010), while to the others, intercorrelation of greater than 0.8 is considered to be indication of high

multicollinearity (Berry & Feldman, 1985). The value of independent variables is very much correlated between them at 0.9, according to Hair, Black, Babin, & Anderson (2010). The variance-inflated factor (VIF) and tolerance value are another method for finding multicollinearity. Hair et al. (2010) reported that a multicollinearity problem is indicated by any VIF greater than 10 and a tolerance value lower than .10 shows a problem of multicollinearity. Multicollinearity statistics show Tolerance values for both independent variable (promotion, pricing, place and product) as .723, .834, .979 and .666 respectively while Variance Inflation Factors (VIFs) showed a value of 1.383, 1.200, 1.022 and 1.502 respectively. These figures suggest that Multicollinearity is not suspected amongst the independent variables. The VIF and the Tolerance value of independent variables are shown in Table 5

4.1.1.3 Linearity

Furthermore, Figure 4.2 specified the linearity graph. From this chart, it was discovered that data points were clustered along the linear line (line of best fit) with no outlier; thus, suggesting good linearity, thereby satisfying the linearity condition. The probability plot (P-P) of the Regression Standardized Residual shows that the points lie in a reasonably straight diagonal line from bottom left to top right. The logical implication is that no key deviations from normality. Thus, suggesting good linearity, thereby satisfying the linearity condition.

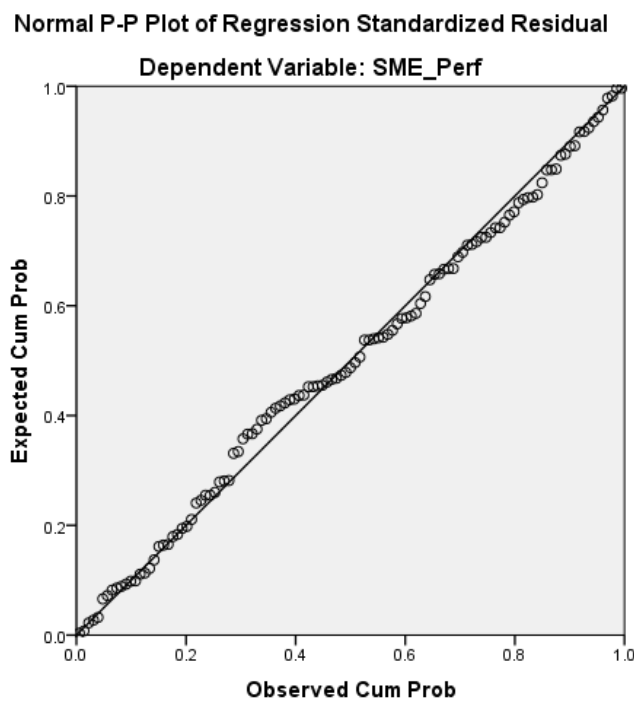


Figure 2: Linearity P-P Plot

4.2 Response Rate

The questionnaire surveys were distributed to all the 339 SMEs participants operating within FCT Abuja. 117 sets of questionnaire were validly retrieved from the 339 questionnaires distributed. Therefore 35 percent response rate was achieved for the study which was considered adequate as Sekaran (2003) recommends a minimum of 30% response rate as acceptable for surveys as shown in Table 1

Table 1: Response Rate

Questionnaire	Numbers	Percentage
Correctly filled	117	35
Not returned	222	65

Total	339	100
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4.3 Reliability Statistics

Reliability test was conducted to determine the reliability and validity of the data. On the basis of Cronbach's alpha, the reliability of the data was .701 as shown in Table 2. Cronbach's alpha coefficient of 0.7 and above is interpreted to be reliable (Cronbach, 1951).

Table 2: Reliability Statistics

Cronbach's Alpha	N of Items
.701	5

4.4 Hypotheses Testing

The multiple regression analysis was carried out to predict the influence of marketing strategies (independent variables) on SME_Perf (dependent variable). The coefficient of determination, R^2 measures the amount of variation in the dependent variable explained by the variation in the independent variable (Keller, 2018). It is the ratio of the squared variation that is explained by the regression (explained sum of squares or SSE) divided by the total variation (total sum of squares or SST). It is a value between zero and one (Wooldridge, 2015). The R-squared shows how well the predictor variables explain the dependent variable and thus represents the variation in Y that is explained by the X variables. Table 4.7 presents a summary of the model in which the item of interest is the adjusted R^2 statistics, which is .664. This suggests that promotion, pricing, place and product account for 66.4% of the variation in SME_Perf. As shown in Table 3

Table 3: Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.822 ^a	.675	.664	1.715	1.713

a. Predictors: (Constant), Product_Strat, Place_Strat, Pricing_Strat, Promo_Strat

b. Dependent Variable: SME_Perf

Table 4 presents the analysis of variance (ANOVA) results. It is also known as model fit results. Of interest in this table are the F-statistics and its associated sig. value. The results show that the F-statistics is 58.2111 ($p = 0.000$). The results indicate that the model's hypothesis that the "model has no power to predict SME_Perf from promotion, pricing, place, and product scores" could not be accepted. Therefore the alternate suggests that the model has power to predict SME_Perf significantly from the promotion, pricing, place, and product scores. To test the fitness of the fixed effect regression model, the F-test (which is automatically reported after running a fixed effect regression) shows the probability that all coefficients in the fixed effect regression is equal to zero (i.e. null hypothesis of all the regression coefficients is zero).

Table 4: ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	685.198	4	171.300	58.211	.000 ^b
	Residual	329.588	112	2.943		
	Total	1014.786	116			

a. Dependent Variable: SME_Perf

b. Predictors: (Constant), Product_Strat, Place_Strat, Pricing_Strat, Promo_Strat

Table 5 presents the results on the coefficients of the regression model. The coefficients results show that promotion positively predict SME_Perf, standardized Beta = .126, (p = 0.048). These results suggest that SME_Perf is dependent on promotion which increased significantly by 12.6 percent. The coefficients results equally showed that pricing significantly and positively predicted SME_Perf, standardized Beta = .149, (p = 0.013). These results suggest that SME_Perf is dependent on pricing strategy which increased significantly by 14.9 percent. Furthermore, the coefficients results showed that place significantly and positively predicted SME_Perf, standardized Beta = .109, (p = 0.047). These results suggest that SME_Perf is dependent on place strategy which increased significantly by 10.9 percent. Finally, the coefficients results show that product positively predict SME_Perf, standardized Beta = .672, (p = 0.000). The results suggest that SME_Perf is dependent on product as it is positively and significantly predicted SME_Perf by 67.2 percent.

Table 5: Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.695	1.877		.903	.368		
	Promo_Strat	.100	.050	.126	1.995	.048	.723	1.383
	Pricing_Strat	.128	.051	.149	2.522	.013	.834	1.200
	Place_Strat	.119	.059	.109	2.008	.047	.979	1.022
	Product_Strat	.583	.057	.672	10.182	.000	.666	1.502

a. Dependent Variable: SME_Perf

Model Specification

$$Y = B_0 + B_1X_1 + B_2X_2 + B_3X_3 + e$$

Where;

$$Y = \text{SME_Perf}$$

B₀ = Intercept or constant

B₁ = Coefficient of Promotion

B₂ = Coefficient of Pricing

B₃ = Coefficient of Place

B₄ = Coefficient of Product

X₁ = Promotion

X₂ = Pricing

X₃ = Place

X₄ = Product

e = Error term

$$\text{SME_Perf} = 1.695 + .100\text{Promo_Strat} + .128\text{Price_Strat} + .119\text{Place_Strat} + .583\text{Product_Strat}$$

4.5 Discussion of the Results

Objective 1

The outcome of this study showed that the coefficient for promotion strategy (0.126) is statistically significant and different from zero. This is because its sig or p value is 0.048 which is below the 5% degree of significance. Therefore, a unit increase in promotion strategy will result in a 0.126 improvement in SME performance. Hence, the null hypothesis was rejected, and a finding made that promotion strategy has a statistically significant

influence on SME performance. The results come to an agreement with prior scholarly works such as Sapuro, (2016) whose study found that there was a significant relationship between promotional marketing strategies and SME performance. Similarly, the outcome of the present study is in resonance with Phokwane (2020) whose research findings depict that SMEs marketing communications strategy has a positive influence on their performance.

Objective 2

Also, the result of objective 2 indicated that the coefficient for pricing strategy (0.149) is statistically significant and different from zero. The reason being that its sig or p value is 0.013 which is below the .05 degree of significance. Consequently, a unit increase in pricing strategy will result in a 0.149 improvement in SME performance. Thus, the null hypothesis was rejected, and a finding made that pricing strategy has a statistically significant influence on SME performance. The outcomes are in line with earlier works of literature such as Colpan, 2006 and Owomoyela et al, 2013) which established that price has a significant relationship on business performance. Likewise, the outcome of the extant study agrees with Gbolagade, Adesola & Oyewale 2013) study which indicated that price consideration has a significant positive impact on business performance.

Objective 3

Similarly, with respect to objective 3, the results specified that the coefficient for place strategy (0.109) is statistically significant and different from zero. The reason being that its sig or p value is 0.047 which is below the .05 or 5 percent degree of significance. Accordingly, a unit increase in place strategy will result in a 0.109 improvement in SME performance. So, the null hypothesis was rejected, and a finding made that place strategy has a statistically significant influence on SME performance. The result is in consonance with the study of Nguyen, McCracken, Casavant, and Jessup (2011), whose results showed that ownership and geographic location have a significant influence on the profitability of the log trucking business,. Equally, the outcome of the present study agrees with Ferri, Mohd, Radia and Hamidreza (2012) whose outcomes disclosed that innovation in assortment; information sharing and transportation coordination had positive and significant relationships with firm performance.

Objective 4

Equally, with respect to objective 4, the results identified that the coefficient for product strategy (0.672) is statistically significant and different from zero. The reason being that its sig or p value is 0.000 which is lower than the .05 or 5 percent degree of significance. As a result, a unit increase in product strategy will result in a 0.672 improvement in SME performance. Consequently, the null hypothesis was rejected, and a finding made that product strategy has a statistically significant influence on SME performance. The result is in harmony with the study of Ebitu (2016) which showed a significant impact of product quality strategy and relationship marketing strategy on the profitability and increased market share of SMEs in Akwa Ibom State. Further result by Ngendahayo, (2019) concluded that product quality has a positive impact on sales performance, which is in tandem the extant study.

5. CONCLUSION AND RECOMMENDATION

The predictor variables mutually explained 67.5 percent of variation in SME performance. Promotion, pricing, place and promotion have positive effect on the SME performance. On individual contributions, product strategy contributed the most while the other three explanatory variables also contributed significantly. Consequently, SME owners and managers of these business enterprises need to work with passion on maintaining and nurturing of marketing mix strategies.

SMEs companies should come up with varieties of products with new design, and features. While doing business SMEs need to take fair prices to customers, offer price discount, and take into account the importance of customers who patronize their products. While setting product prices, SMEs managers should equally organize promotion through the use of various social media channels. In fact, SMEs should produce quality products, charge equitable price, position suitably, and promote extensively to the final consumers. Also, SMEDAN

should develop effective policies on marketing since marketing is one of the key contributing factor of SMEs performance.

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Perceptions of Micro, Small and Medium Entrepreneurs on the Importance of Fair Presentation of Financial Statements with the Implementation of SAK EMKM as a Moderation Variable

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Abstract

The ability of Micro, Small and Medium Enterprises (SME) in surviving in the midst of a crisis shows that this group is far more independent than large entities that generally rely on banking in terms of funding and operations. The contribution of SME in the government's trade balance is indicated by the amount of contribution to gross domestic product (GDP). The presence of SME that has not been incorporated is one of the problems that must be addressed, this is because without a difficult legal entity for an SME to take advantage of government financing facilities. In addition, it is difficult for SME to obtain external financial resources, this is because SME often cannot show financial reports that are in accordance with Financial Accounting Standards in Indonesia (FAS). The implementation of the FAS for SME in Indonesia is an effort to make it easy for SME enterprises for each transaction they make. The application of the EMKM SAK makes it easy for SME entrepreneurs to present financial reports in accordance with the Indonesian GAAP in force

Keywords: Entrepreneur Perception, SAK EMKM, Credit Amount

Introduction and Background

Toughness of Micro Small and Medium Entities (EMKM) running its business wheels has been tested when Indonesia hit the economic and monetary crisis (krismon) in 1998. Only EMKM was not significantly affected by the economic storms in Indonesia at that time. The crisis began in East Asia in 1997, which caused panic in almost all parts of the world. Thailand was the earliest affected by the crisis, known as the Tom Yam Gung Crisis. Indonesia was hit by the crisis in Thailand, even the worst. This happens because large Indonesian entrepreneurs (conglomerates) make many short-term foreign loans. As well as purchasing raw materials using foreign currency. Conglomerates buy raw materials in foreign currency, but sell their products domestically in rupiah transactions. As well as short-term loans that must be paid in foreign currency. This became the main cause of the Monetary crisis in 1998, as well as political turmoil that cannot be ruled out. During the crisis period, the EMKM group was the most resilient to survive the crisis of the krismon. They try to be "independent" away from the use of banking facilities, and production raw materials are purchased in rupiah, and much of their production is exported. In fact, the krismon brought great benefits to the EMKM group.

The contribution of EMKM to national gross domestic product (GDP) cannot be underestimated. Bank Indonesia (BI) assesses that the potential of Micro, Small and Medium Enterprises (MSMEs) is very large in driving economic growth, with a contribution of up to IDR 850 trillion per year (GDP). Based on data from the Central Statistics Agency (BPS), the contribution of MSMEs to the economy is quite large, reaching 61.41 percent, while the absorption of MSMEs at least dominates nearly 97 percent of the total national workforce. The number of UMKM has even reached 60 million units. According to Indef Economist, Bhima Yudhistira, it is predicted that in 2017-2020 the number of MSMEs units can reach 65 million units, both medium, micro and small businesses. However, the challenges for MSMEs are still quite large, especially in the manufacturing sector. The non-oil and gas portion of MSME exports is still below 16 percent. In addition, the latest data on the small and medium processing industry has decreased. (www.republika.co.id). Reflecting on the condition of Indonesia during the 1998 crisis, the government is concerned about empowering the EMKM sector. A series of pro-EMKM policies have been introduced by the government, especially the ease of access to capital funds for business development, or even for starting new businesses. Among the most popular policies for EMKM, the People's Business Credit (KUR). Rolling out through the Minister of Finance Regulation No. 135 / PMK.05 / 2008 concerning the People Business Credit Guarantee Facility as amended by Regulation of the Minister of Finance No. 10 / PMK.05 / 2009. The government also complements the KUR policy by enacting Government Regulation (PP) Number 7 of 2016 concerning Changes in the Authorized Capital of Limited Liability Companies, which is credit / financing to Micro, Small, Medium Enterprises, Cooperatives (UMKM-K) in the form of providing working capital and supported investment. guarantee facility for productive businesses. It is hoped that KUR will be able to become a solution for the EMKM sector to start or develop a business effectively and efficiently. The source of KUR funds as a program launched with "gegap gempita" by the government, the source of the funds entirely comes from bank funds.

The main objectives of the KUR program are to accelerate the development of primary sectors and empowerment of small-scale businesses, to increase accessibility to credit and financial institutions, reduce poverty levels, and expand employment opportunities. Basically, KUR is a working capital and investment credit provided specifically for productive business units through a credit guarantee program. The enactment of this law affects entrepreneurs who choose to establish EMKM with legal entity status, article 1 PP No. 7 of 2016 states that the company's authorized capital is at least IDR 50,000,000.00, but for MSMEs, the Authorized Capital is determined based on the agreement of the founders of PT as outlined in the Deed of Establishment of PT. In the previous regulation, namely Article 32 paragraph (1) of Law no. 40 of 2007 concerning Limited Liability Companies, the minimum amount of Authorized Capital is IDR 50,000,000.00.

Thus, the enactment of the provisions in PP No.7 of 2016 allows business actors to establish legal entities with Authorized Capital below IDR 50,000,000 as long as they meet the EMKM criteria in accordance with Article 6 of Law No. 20 of 2008. The distribution of People's Business Credit (KUR) nationally for 2016 reached Rp. 94.4 trillion, while for 2017 it reached Rp. 96.7 trillion, an increase of 2.4%. In East Java, KUR disbursement reached Rp. 16.3 trillion in 2017, an increase of 20.7% compared to 2016, which disbursed Rp. 14.6 trillion. The Financing Policy Committee for MSMEs, chaired by the Coordinating Minister for Economic Affairs, has increased the KUR distribution target in the production sector (agriculture, fisheries, processing industry, construction and production services). In 2018, the distribution target for the production sector is a minimum of 50% of the total distribution target of IDR 120 trillion. "The target is one of the government's efforts to support the food security policy and downstream industry in the MSMEs sector. To achieve the KUR distribution target in the production sector, the government has also designed a special KUR. The special KUR scheme is aimed at smallholder plantation commodities, smallholder livestock, and community fisheries. Special KUR is given to groups using a joint responsibility mechanism including novice entrepreneurs who are part of the group, and managed collectively in the form of clusters using business partners. "This special KUR can finance the rejuvenation of smallholder oil palm plantations, purchasing boats for fishermen and fattening people's livestock. The Special KUR ceiling is over IDR 25 million to IDR 500 million for each individual group member. (www.ekon.go.id).

Through KUR, the government will continue to strive to improve access to financing for Micro, Small and Medium Enterprises (MSMEs) to financial institutions with a guarantee scheme. The government has issued

Regulation of the Coordinating Minister for Economic Affairs (Permenko) Number 11 of 2017 concerning Guidelines for Implementing KUR. "This Permenko is a substitute for the previous regulation which was effective starting January 1, 2018." The changes to the KUR policy stipulated in the regulation include: (1) A decrease in the KUR interest rate from 9% to 7% effective per annum; (2) business groups as potential KUR recipients; (3) Special KUR Scheme; (4) a multi-sector KUR scheme; (5) Minimum arrangement of KUR distribution portion to the production sector; (6) Yarnen mechanism (credit payment after harvest) and grace period; (7) Changing the term KUR Retail to KUR Kecil; (8) the micro KUR ceiling for the production sector and outside the production sector; (9) Distribution of KUR together with other permitted credits; (10) The structure of the KUR fee for placing TKI; (11) KUR for border area communities; (12) KUR to optimize the Joint Business Group (KUBE).

Today, there are still many MSME actors who are reluctant to form a legal entity business because they do not want to pay taxes imposed on industries, especially on the micro and small scale. In fact, it is important for MSME actors to have a legal entity for their business, this is mainly seen from a long-term perspective. The role of legal entities is needed when these MSMEs turn into large companies in the future. For example, the importance of the role of legal entities can be seen in the provision of bank credit. In extending credit, a commercial bank is required to have confidence in the ability and ability of the debtor to pay off his debts as agreed, thus in implementing credit agreements, banks must ensure that their customers are capable of exercising the rights and obligations arising from the agreement. Banks can only consider providing credit if the applicant is a legal subject, which means that they can receive rights and obligations. As a legal subject, legal entities have a very important position in providing bank credit, which is why it is important for MSMEs to have legal entities.

In addition, with a legal entity, MSME business actors will easily synergize and develop their business. With the synergy between small and micro business actors, small business growth itself will be easily achieved, because to develop, MSMEs must synergize or work together with other businesses. The role of MSMEs in the national economy must continue to be considered by the Government of Indonesia. The policies described above are only a few of the positive responses of the Government to the problems currently faced by MSME actors in Indonesia. If the Government really wants to make MSMEs the main economic actors in a competitive national economy, then the Government must continue to oversee the development of MSMEs and continue to actively intervene in solving every problem faced by MSMEs, one of which is by implementing policies as described in this writing.

The realization of KUR at the position in April 2018 had reached IDR 45,088,902,000,000 with a total of 1,709,104 debtors. This means that the number that has been realized is 38.6%. (kur.ekon.go.id). The cause of the low KUR distribution is because the banks appointed as KUR distributors are very careful in lending, because they do not get adequate information regarding the conditions of MSMEs. The majority of MSME entrepreneurs are unable to provide accounting information regarding their business conditions (Baas and Schrooten 2006).

Financial Report, as the main product of the accounting discipline, presents EMKM financial information. So that banks as KUR distributors can analyze the services of MSMEs entrepreneurs getting KUR. Preparation of Financial Statements is not a simple matter. Various reasons so that EMKM was unable to present financial reports on the results of its operations. Among other things: (1) lack of knowledge about accounting, (2) procedures and accounting processing processes that are considered complicated, and (3) the assumption that financial reports are not important for MSMEs (Said 2009). A number of other obstacles faced by MSMEs are the absence of owners or employees with accounting or bookkeeping educational backgrounds, the absence of sufficient funds to hire accountants or purchase accounting software to facilitate the implementation of accounting bookkeeping.

When the Financial Accounting Standards Board (DSAK) on 24 October 2016 ratified the Financial Accounting Standards for MICRO, SMALL, AND MEDIUM ENTITIES (SAK-EMKM), it will be effective as of January 2018 but application before the effective date is allowed. The use of SAK-EMKM has a scope of

use by business entities that do not have public accountability, such as micro, small and medium enterprises (MSMEs). These IFRSs are easier to understand and less complex than General SAKs. Another convenience for MSMEs in terms of recording accounting transactions is the increasing number of accounting software that can be used by MSMEs. In the future, it is expected that MSMEs will be able to carry out accounting activities to present financial reports so that it will be easier for MSME entrepreneurs to obtain financing from financial institutions.

Based on this, the authors are interesting to conduct research on (1) the factors that influence the perception of MSME entrepreneurs regarding the importance of accounting and financial reporting for their business, (2) whether the quality of these reports affects the amount of credit approved by the bank, and (3) To the extent that where the application of SAK-EMKM in the preparation of financial reports (4) Assessing the prospects for implementing SAK EMKM in 2018 which is based on the understanding held by MSME entrepreneurs of Financial Accounting Standards.

Literature Review

Agency Theory and Stewardship Theory

The main theory (grand theory) which is used as a reference in this research, is the agency theory. Jensen and Meckling (1976) in agency theory explain that agency relations arise when one or more people as principals employ other people as agents and then delegate decision-making authority to agents. The next basic theory is stewardship theory. The implication of stewardship theory in EMKM companies is that the steward (EMKM company management) will work as well as possible. For the interests of the owner (community and government) (Puspitarini, 2012), one example of applying this theory is a participatory mechanism that has a positive impact on performance (Eddleston and Kellermanns, 2007). Increased control by EMKM in decision making is also related to the level of institutional performance (Brown Jr, 2001).

The targets to be achieved in the development of the EMKM sector are based on the premise that (i) SMEs are the engines of economic development, but (ii) market and institutional failures hinder their growth (EMKM), so government intervention is needed, despite the skepticism that questions the efficacy of pro policies. -EMKM. In particular, many critics emphasized the importance of creating a conducive business environment for the EMKM sector to be able to compete with medium and large companies (Beck, 2006).

The cause of the low KUR distribution is because the banks appointed as KUR distributors are very careful in lending, because they do not get adequate information regarding the conditions of MSMEs. The majority of MSME entrepreneurs are unable to provide accounting information regarding their business conditions (Baas and Schrooten 2006). With adequate accounting, MSME entrepreneurs can meet requirements in applying for credit, such as making financial reports (Warsono 2009). However, the implementation of bookkeeping is a difficult thing for MSMEs due to limited knowledge of accounting, the complexity of the accounting process, and the assumption that financial reports are not important for MSMEs (Said 2009). Various kinds of other limitations faced by MSMEs are an educational background that does not understand accounting or bookkeeping, lack of discipline in carrying out accounting bookkeeping, and the absence of sufficient funds to hire accountants or buy accounting software to facilitate the implementation of accounting bookkeeping. The Financial Accounting Standards Board (DSAK) in 2016 has ratified the SAK-EMKM, effective as of January 1, 2018, but implementation before the effective date is allowed.

The targets to be achieved in the development of the EMKM sector are based on the premise that (i) SMEs are the engines of economic development, but (ii) market and institutional failures hinder their growth (EMKM), so government intervention is needed, despite the skepticism that questions the efficacy of pro policies. -EMKM. In particular, many critics emphasized the importance of creating a conducive business environment for the EMKM sector to be able to compete with medium and large companies (Beck, 2006).

Most of the MSMEs only record the amount of money received and disbursed, the amount of goods purchased and sold, and the amount of accounts receivable / debt. But the bookkeeping not in the format desired by the banking sector (Jati 2004). Hiring someone specifically to do accounting bookkeeping and preparation of financial reports is still unrealistic for many MSMEs because it will increase expenses to pay the accounting staff's salaries. Murniati (2002) examines the factors that influence the preparation and use of accounting information in small companies in Central Java with a sample of 283 small and medium entrepreneurs. It was found that owner / manager characteristics (tenure, manager / owner formal education, and accounting training attended by managers / owners) as well as characteristics of small and medium enterprises (company age, industrial sector, and business scale) significantly had a positive effect on preparation and use accounting information on the company. Pinasti's research (2001) found that small traders in traditional markets in Banyumas Regency did not organize and did not use accounting information in managing their business.

Decisions in business management are based more on non-accounting information and cursory observations of the market situation. In general, they consider accounting information to be unimportant. The reasons put forward include: they feel too bothered by the maintenance of the accounting records and the important thing is that they get a profit without being burdened with accounting operations. They have not felt the benefits of keeping books. Baas and Schrooten (2006) in their research state that banks in channeling credit to MSMEs use Soft Information & Hard Information. Soft Information uses the Relationship Lending technique, which is lending on the basis of trust and a well-established relationship between banks and entrepreneurs. Hard information includes using: 1) Financial Statement Lending, namely by using financial statements that are in accordance with applicable accounting standards as a source of information for lending, 2) Assets Based Lending, namely by using information related to assets that are used as collateral, 3) CreditScoring, the use of statistical techniques using financial data from financial reports as well as creditworthiness and the background of MSME owners to be given ratings. Baas and Schrooten concluded that almost all over the world, MSMEs experience difficulties in obtaining bank credit.

One of the reasons is the limited information that can be provided by MSMEs to external parties. The suggestion given in this research is the importance of accounting standards that are able to accommodate the needs of MSME entrepreneurs, in order to help MSMEs in providing higher quality financial information. Cziráky et al. (2005) examined the factors that led to low MSME lending in Croatia. The MSMEs credit program run by the Croatian government turns out to have low credit distribution, even though the government has provided subsidies to the interest rate and the supply of funds that are deemed sufficient for credit needs for MSMEs.

Their results showed that on average banks were inconsistent in terms of the use of credit approval criteria. This inconsistency is due to differences in skills and knowledge in credit assessment of bank employees in that country. There is a preference on the part of the banking sector to agree more on providing small amounts of credit and for smaller companies which are classified as safer. This condition occurs due to banks being classified as risk averse due to lack of information in the credit assessment process. Bornheim and Herbeck (1996) mention the factors that can influence the relationship between banks and MSME entrepreneurs, including: from the banking side in the form of availability of debtor information, competition between banks, and product promotion costs, while from the side of MSME entrepreneurs the factors that influence the relationship with banking, it can be in the form of the amount of guarantee, access to credit, and the cost of capital for the option to make a loan which can be seen from the amount of loan interest that applies. Jati et al. (2004) stated that at present, most MSMEs have not kept their accounting books and reports properly.

Previous Research

Previous studies that are relevant to this research include:

In previous research, it was found that the majority of MSME entrepreneurs only recorded bank cash transactions in the form of receipts and expenses, the amount of goods purchased and sold, and the balance of their accounts payable and accounts receivable. It is clear that the format of this accounting information is not in accordance with banking accounting reporting standards (Jati 2004).

Baas and Schrooten (2006) in their research state that banks in channeling credit to MSMEs use Soft Information & Hard Information. Soft Information uses the Relationship Lending technique, which is lending on the basis of trust and a well-established relationship between the bank and the entrepreneur. Hard information includes using: 1) Financial Statement Lending, namely by using financial reports that are in accordance with applicable accounting standards.

Czirák et al. (2005) examined the factors that led to low MSME lending in Croatia. The UMKM credit program run by the Croatian government turns out to be low in credit distribution, even though the government has provided subsidies to interest rates and the supply of funds that are deemed sufficient for the credit needs of MSMEs. Their results showed that on average banks were inconsistent in terms of the use of credit approval criteria.

Conceptual Framework

The conceptual framework that will be carried out in the research is described as follows:

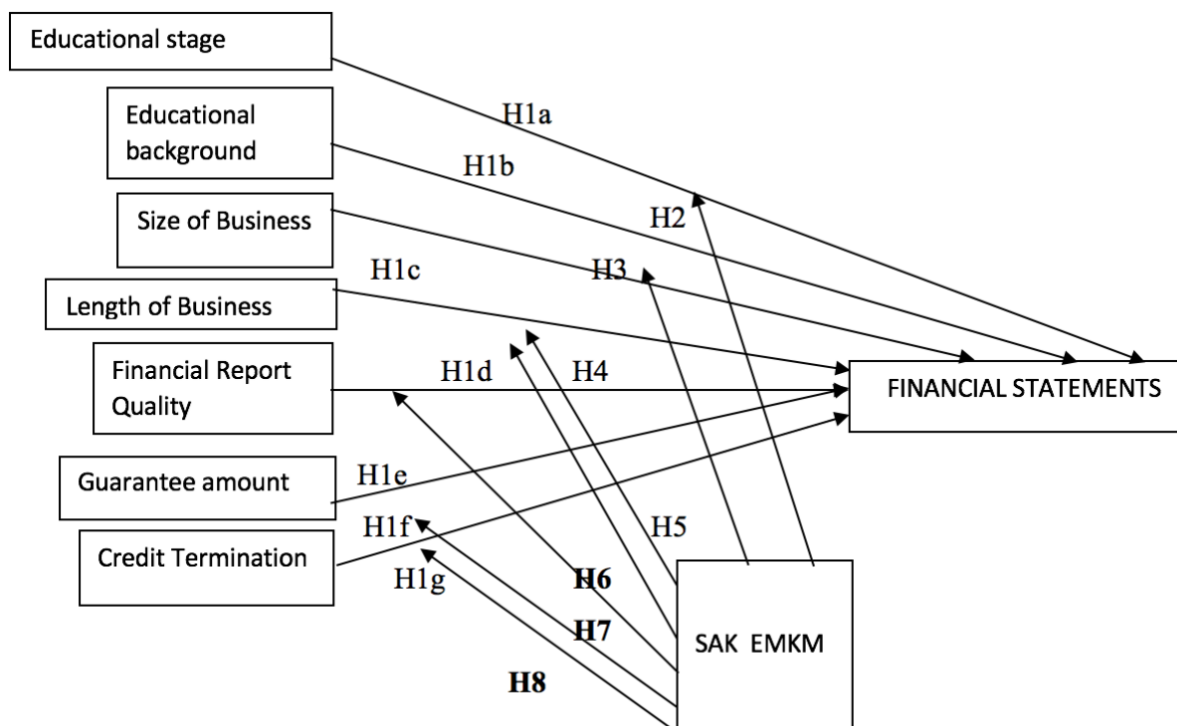


Figure 1: Framework

Hypothesis Building

Bornheim and Herbeck (1996) mention factors that can influence the relationship between banks and MSME entrepreneurs, including: from the banking side in the form of availability of debtor information, competition between banks, and product promotion costs. Meanwhile, from the perspective of MSME entrepreneurs, the factors that influence the relationship with banks can be the amount of collateral, access to credit, and the cost of capital for the option to make a loan, which can be seen from the amount of loan interest that applies.

Knowledge about accounting and the usefulness of financial reports is mainly obtained when someone is studying accounting. Entrepreneurs with a background in accounting are believed to have a better perception of SAK EMKM than entrepreneurs with non-accounting educational backgrounds. The size of the business is thought to have a positive effect on the perception of MSMEs. The length of time a business has been

established is thought to have a positive influence on the perception of MSME entrepreneurs regarding SAK EMKM. According to Amburgey et al. (1993) and Henderson (1999), in Anderson and Eshima (2011), a longer business life provides an advantage in terms of having an organizational structure and routine transaction processes that will discipline every company action. Included in this process is the bookkeeping process. Das and Dey (2005) found a positive relationship between the age of MSME businesses and the frequency of doing regular bookkeeping. MSMEs with longer lifespan who do bookkeeping more regularly are thought to have a better perception of SAK EMKM. Based on the explanation above, the hypothesis is:

H1a: The last level of education has a positive effect on the perceptions of entrepreneurs regarding the importance of financial accounting and reporting for their business.

H1b: Educational background has a positive effect on the perceptions of entrepreneurs regarding the importance of accounting and financial reporting for their businesses.

H1c: Business size has a positive effect on entrepreneurs' perceptions regarding the importance of financial accounting and reporting for their business.

H1d: The length of time the business has been established has a positive effect on the perceptions of entrepreneurs regarding the importance of financial accounting and reporting for their business.

H1e: The quality of financial reports has a positive effect on the perceptions of entrepreneurs regarding the importance of financial accounting and reporting for their businesses.

H1f: The amount of the credit guarantee has a positive effect on the perception of entrepreneurs regarding the importance of financial accounting and reporting for their business.

H1g: Credit terms have a positive effect on entrepreneurs' perceptions regarding the importance of financial accounting and reporting for their businesses.

Cziráky et al. (2005) stated that the cause of the low level of MSME credit distribution is that banks do not have sufficient information to conduct creditworthiness assessments. Company size is an important factor in gaining access to funding (Audretsch and Elston 1997). Smaller companies are considered to have a greater risk of experiencing financial difficulties (Mac an Bhaird and Lucey 2010). Company age is also a factor influencing SMEs to obtain credit from banks. The more mature a company is, the easier it is to obtain credit, because a younger company is more likely to experience business failure than a company with a longer business life (Cressy 2006).

SMEs often have limited assets to use as credit collateral. In fact, one of the information banks use in their decision to extend credit is to use information related to assets that are used as collateral (Assets Based Lending) (Baas and Schrooten 2006). SMEs that have assets to be used as credit collateral are more likely to get credit from banks. Kirschenmann and Norden (2010) conducted a study on the relationship between debtor risk and the credit period for credit extended by banks to small businesses. They found a positive relationship, which means that the larger the credit period, the higher the risk of the loan. Therefore, it is assumed that the term (credit term) will have a negative effect on the amount of credit extended by banks to MSME entrepreneurs. The relationship is positive, which means that the greater the credit period, the higher the risk of the loan. Therefore, it is assumed that the term (credit term) will have a negative effect on the amount of credit extended by banks to MSME entrepreneurs.

In this research, the authors describe SAK EMKM as a moderating variable that can moderate the relationship between EMKM entrepreneurs' perceptions and the amount of credit received into the following hypotheses:

H2 : SAK EMKM can moderate the effect of the last level of education on the Presentation of Financial Statements

H3 : SAK EMKM can moderate the influence of educational background on the Presentation of Financial Statements

H4 : SAK EMKM can moderate the effect of business size on the Presentation of Financial Statements

H5 : SAK EMKM can moderate the effect of the company's age (old) standing on the Presentation of Financial Statements

H6 : SAK EMKM can moderate the effect of the quality of financial statements on the

Presentation of Financial Statements

H7 : SAK EMKM can moderate the effect of the amount of guarantee on the Presentation of Financial Statements

H8 : SAK EMKM can moderate the effect of credit terms on the Presentation of Financial Statements

Methods:

1. Research design

This research is quantitative research, namely analyzing data in the form of numerical (numbers) which is managed by statistical methods, (Arikunto 2007) using the Verification Method, namely the method of testing the objectives that have been determined whether or not they are in accordance with existing theories to make new theories and creating new knowledge.

2. Definition and Operationalization of Variables

The definition of the operationalization of the variable aims to determine the measurement scale of each variable, so that hypothesis testing using tools can be carried out appropriately. In more detail the operationalization of the variables in his research are: (1) Factors Affecting EMKM Entrepreneurs' Perceptions, as an independent variable - X1, (2) Amount of Credit received, as Independent Variable - X2 and (3) SAK EMKM, as a moderating variable.

3. Variable Measurement

The following is an explanation of the measurement of the variables used:

Perceptions of MSME Entrepreneurs (SME_PERCEPT)

The perception of UMKM entrepreneurs is a variable that represents the views of UMKM entrepreneurs regarding the importance of accounting and financial reporting for MSMEs on their business development. Measurement using a scale of 1 - 4 (from very not important or if not answered to very important) 1.

Understanding of SAK EMKM (SME_UNDERST)

This variable is calculated by assessing the respondent's answer to the following questions:

1. Do you fully understand the contents of the SAK EMKM?

a. Yes (if yes, please explain briefly the contents of the SAK ETAP)

b. Not

2. Do you know the difference between SAK ETAP and SAK EMKM?

a. Yes (if yes, please explain briefly)

b. Not

If you answer Yes, you will get a score between 1-5 depending on the accuracy and completeness of the answers given and those who answered No will get 0 points. The details of the weight of the answers are as follows:

1. Yes, do not understand the detailed differences between SAK ETAP and SAK EMKM

2. Yes, Have read and understand globally between SAK ETAP and SAK EMKM

3. Yes, you can understand the difference between the use of SAK ETAP and SAK EMKM

4. Yes, Can understand and explain the different formats for preparing financial statements based on SAK ETAP and SAK EMKM

5. Yes, you can prepare financial reports using the two SAKs.

Last Education (EDU_LEV)

A better understanding of SAK ETAP can be influenced by higher education levels. The measurement for this variable is 1 if education is lower than SMA / SMK, 2 if it has SMA / SMK education, 3 if it has S1, 4 if it has S2 education, and 5 if it has doctoral education.

Educational background (EDU_BACKG)

If you have an educational background in Accounting, it will be given a score of 3, while if you have a background in Management and Economics education, it will be given a score of 2, as well as for the background other educational backgrounds (including if you have a high school education background) receive a score of 1.

Size of business (SIZE)

The size of the business is determined based on the number of employees, total assets and sales value. Here are the questions and answer options to find out the size of the business:

1. Number of Employees:
 - a. <4 people; b. 5 - 19 people, c. 20 - 99 people, d. \geq 100 people
2. Company Assets:
 - a. <from IDR 100 million,
 - b. IDR 100 million - IDR 499 million,
 - c. IDR 500 million - IDR 2.5 billion,
 - d. > from IDR 2.5 billion
3. Company Sales:
 - a. <from IDR 100 million,
 - b. IDR 100 million - IDR 499 million,
 - c. IDR 500 million - IDR 2.5 billion,
 - d. > from IDR 2.5 billion

Each answer option is given a value of 1 for the answer "a," 2 for the answer "b," 3 for "c," and "4" for the answer "d." The value of the three questions is added and based on the sum of the results, the size of the business is grouped into micro business groups for values between 1 - 4, small businesses between 5 - 8, and for values > 9 classified as medium enterprises.

Length of Establishment of Business (AGE)

The length of time a business has been established is one of the considerations in evaluating a business by both banks and investors, because from the age of the business, the business stage of the business can be seen along with the track record of the business so far. The value of 1 is given if the length of the business is 1 year, then 2 is for the length of business that has been established between 1 year to 3 years, and 3 for the length of the business that has been established for more than 3 years.

Quality of MSME Financial Reports (REP_QUAL)

In this study, the financial report quality index is assessed based on:

- (1). UMKM players do accounting records or not, if they answer "Yes" then they will get points 1, and 0 for the answer "No."
- (2). There is a section or division or special employee in the company that is responsible for accounting and financial reporting, point 1 is given if the answer is "Yes" and 0 for the answer "No."
- (3). The existence of accounting software that supports the bookkeeping, point 1 is given if the answer is "Yes" and 0 for the answer "No"
- (4). Early financial statements were first made. Value is given according to the number of years from the beginning of the financial statements until 2017.
- (5) Routine or not, transaction bookkeeping and financial reporting are made, if you answer "Routine" you will get 1 and 0 points for the answer "No."
- (6).

The accounting standard used, if the answer to the answer is “PSAK,” or “Taxation Rules” or “Others” gets point 1, and point 0 for the answer “Don't Know.” (7). Financial report components to be made (there are 5 financial statement components). Can answer more than 1 choice and each choice has 1 point, with the maximum point being 5. The points obtained from each of these questions are added up to get the financial report quality index score.

Credit Guarantee (CLTRL)

Is the value of assets owned by entrepreneurs that are used as collateral in applying for credit. The points given for the answer to this question are 1 if there is no guarantee, 2 for a guarantee of less than IDR 10,000,000, 3 for IDR 10,000,001– IDR 25,000,000, 4 for IDR 50,000,001– IDR 100,000,001, and 5 for more. from IDR 100,000,000.

Credit Term (TERM)

This is the period given to MSMEs to be able to pay or pay off their credit loans. The score given in the answer to this question is 1 for a credit term of less than 1 year, 2 for a credit term > 1 year to 3 years, and 3 for a credit term of more than 3 years.

Method of Collecting Data

The questionnaire used for data collection in this study is an extension of Siregar et al. (2011). The data used comes from questionnaires distributed to MSME entrepreneurs in the area around Jakarta, by visiting directly so that all questionnaires can be filled. The selected respondents are respondents who based on observations have a business scale that is not too large. In the questionnaire there are also questions about the number of employees, total assets, and total sales to determine whether the respondent is indeed an MSME.

Data Analysis Method

The analytical method used in this study is assisted by software eviews and consists of:

1. Descriptive Statistics

Descriptive statistics are used to present data, analyze ngka data in order to provide an orderly, concise and clear picture of a particular symptom or event.

2. Data Quality Testing

1. Normality test
2. Test outliers

3. Classic Assumption Test

1. Auto correlation test
2. Multicollinearity test
3. Heterokedacity test

Quantitative Analysis with Regression (OLS)

Multiple Regression Analysis

$$LPK = \alpha + \beta_1JPP + \beta_2LBP + \beta_3UKU + \beta_4LMU + \beta_5KUL + \beta_6BJM + \beta_7TRK + e$$

$$LPK = \alpha + \beta_1JPP + \beta_2SAK + \beta_3JPP * SAK + e$$

$$LPK = \alpha + \beta_1LBP + \beta_2SAK + \beta_3LBP * SAK + e$$

$$LPK = \alpha + \beta_1UKU + \beta_2SAK + \beta_3UKU * SAK + e$$

$$LPK = \alpha + \beta_1LMU + \beta_2SAK + \beta_3LMU * SAK + e$$

$$LPK = \alpha + \beta_1KUL + \beta_2SAK + \beta_3KUL * SAK + e$$

$$LPK = \alpha + \beta_1BJM + \beta_2SAK + \beta_3BJM * SAK + e$$

$$LPK = \alpha + \beta_1TRK + \beta_2SAK + \beta_3TRK * SAK + e$$

Where: LPK is Presentation of Financial Statements, JPP is education level, LBP is educational background, UKU is business size, LMU is length of business, KUL is the quality of financial reports, BJM is the amount of guarantee, and TRK is the credit term, SAK is SAK EMKM and "e" is the Residual Variable.

Hypothesis Test

Hypothesis Testing Using (Uji t).

The Coefficient Of Determination

To find out how much the independent variable contributes to the dependent variable by using the coefficient of determination.

Results

Descriptive Results

Based on the research results, the descriptive value of each variable is obtained, the results can be seen in the table below.

Table 1: Descriptive Statistics

Descriptive Statistics						
	N	Minimum	Maximum	Mean	Std. Deviation	
JPP	250	1.00	5.00	2.5960	1.03006	
LBP	250	1.00	3.00	2.0120	.51859	
UKU	250	1.00	2.00	1.3680	.48323	
LMU	250	1.00	4.00	2.0840	.72043	
KUL	250	6.00	14.00	9.6120	1.49881	
BJM	250	1.00	4.00	1.3080	.54251	
TRK	250	1.00	4.00	1.7720	.77097	
SAK	250	.00	6.00	1.5360	1.39156	
LPK	250	1.00	7.00	2.5720	1.16026	
Valid N (listwise)	250					

Based on the table, it can be seen that the descriptive research variable data contains information about the minimum, maximum, average and standard deviation values. The information is as follows:

1. The letter N indicates the number of samples of 250 respondents.
2. The JPP (Education Level) variable has a minimum value of 1.00 with a maximum value of 5.00. The average value is 2.5960 with a standard deviation of 1.03006. The LBP variable (educational background) has a minimum value of 1.00 and a maximum value of 3.00. The average value is 2.0120 with a standard deviation of 0.51859.
3. The UKU (Business Size) variable has a minimum value of 1.00 and a maximum value of 2.00. The average value is 1.3680 with a standard deviation of 0.48323.
4. The LMU variable (length of business) has a minimum value of 1.00 and a maximum value of 4.00. The average value is 2.0840 with a standard deviation of 0.72043.
5. The variable KUL (Quality of Financial Statements) has a minimum value of 6.00 and a maximum value of 14.00. The average value is 9.6120 with a standard deviation of 1.49881.
6. The variable BJM (Amount of Guarantee) has a minimum value of 1.00 and a maximum value of 4.00. The average value is 1.3080 with a standard deviation of 0.54251.
7. The TRK (Credit Term) variable has a minimum value of 1.00 and a maximum value of 4.00. The average value is 1.7720 with a standard deviation of 0.77097.
8. The SAK variable (SAK EMKM) has a minimum value of 0.00 and a maximum value of 600. The average value is 1.5360 with a standard deviation of 1.39156.

9. The LPK (Financial Report) variable has a minimum value of 1.00 and a maximum value of 7.00. The average value is 2.5720 with a standard deviation of 1.16026.

Classical Assumption Test Results

1. Normality Test

Normality test is performed to determine whether the data is normally distributed or not. The results of the normality test can be seen in the histogram image and the normal P-Plot curve.

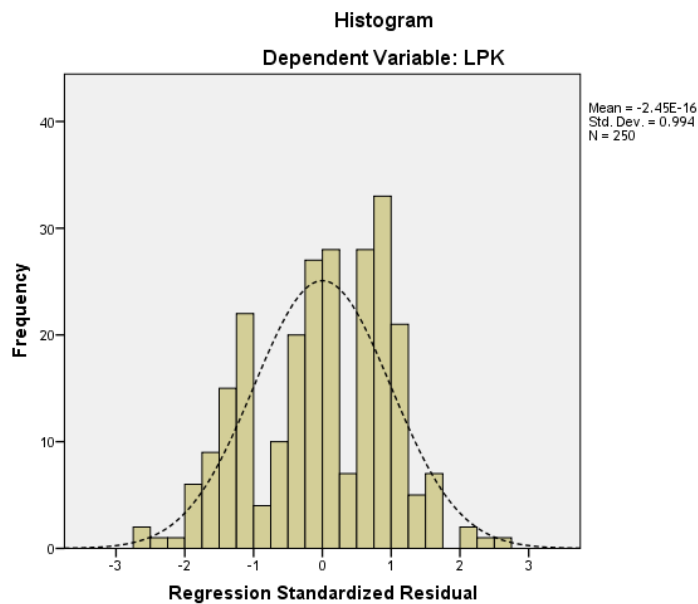


Figure 2: Normality Test Results using a Histogram

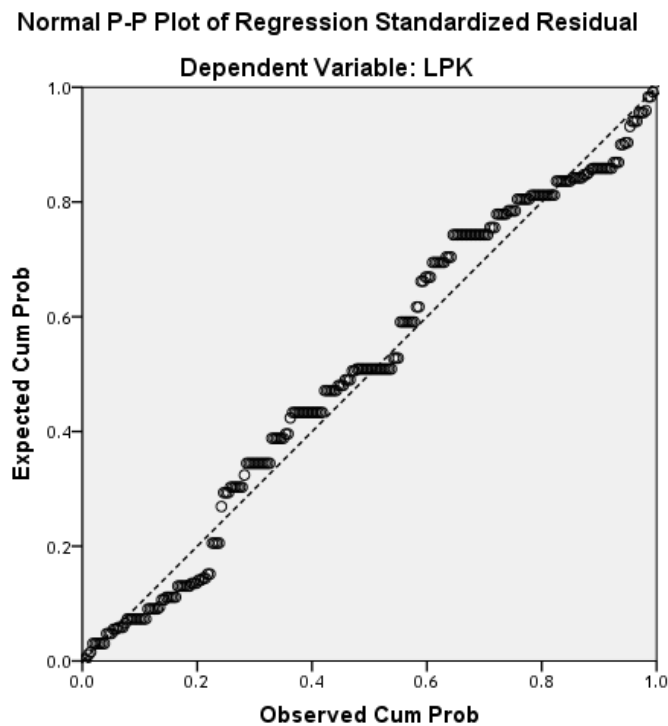


Figure 3: Normality Test Results using the Normal P-Plot

Based on the histogram, it can be seen that the data follows a normal curve so that it can be stated that the data is normally distributed. The test results using the normal P-Plot also show that the data is around the normal line.

2. Autocorrelation Test

The autocorrelation test results show that the Durbin-Watson (DW) value of 2.068 is between the du and 4-du values. (between 1,803 - 2,197).

Table 2: Autocorrelation Test Results
Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.581 ^a	.337	.329	.95049	2.068

a. Predictors: (Constant), JPPSAK, JPP, SAK

b. Dependent Variable: LPK

The autocorrelation test was performed using the DW test showing a DW value of 2.068. based on the DW table for a sample size of 250 with a total of 7 independent variables, the DL value is 1.550 and DU is 1.803. Thus the DW test value of 2,068 is between du and 4-du, so there are no autocorrelation symptoms in the research data.

3. Multicollinearity Test

The multicollinearity test results can be seen in table 4.3 below.

Table 3: Multicollinearity Test Results
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.162	.316		-.512	.609		
JPP	.088	.037	.078	2.390	.018	.879	1.138
LBP	.393	.076	.176	5.143	.000	.810	1.235
UKU	.070	.077	.029	.918	.359	.929	1.077
LMU	-.064	.050	-.039	-1.266	.207	.973	1.028
KUL	.097	.024	.125	3.972	.000	.954	1.048
BJM	.578	.070	.270	8.308	.000	.894	1.119
TRK	1.086	.049	.722	22.137	.000	.888	1.126

a. Dependent Variable: LPK

Based on the VIF value, it can be seen that all VIF values have values below 10 so that there is no multicollinearity. Thus all independent variables can be used in the regression model.

4. Heteroscedasticity Test

The results of the heteroscedasticity test showed that the data did not have heteroscedasticity symptoms because they were in four different quadrants.

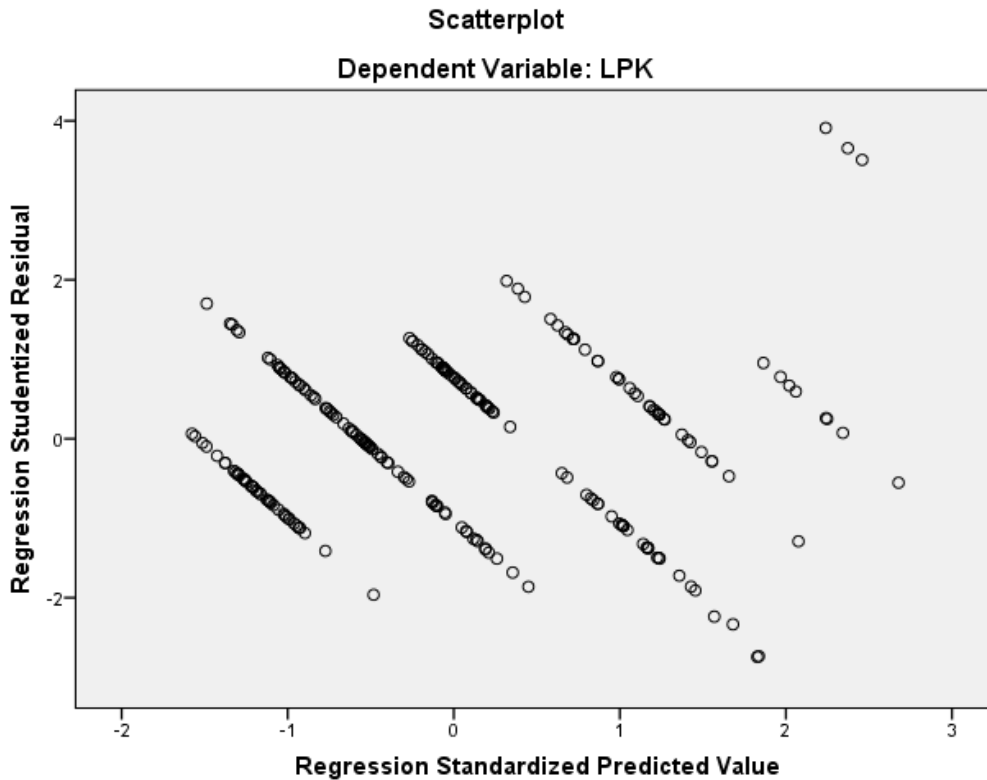


Figure 4: Heteroscedasticity Test Results

Multiple Regression Analysis

The results of multiple regression analysis are shown in Table 4

Table 4: Results of Multiple Regression Analysis
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	-.162	.316		-.512	.609		
JPP	.088	.037	.078	2.390	.018	.879	1.138
LBP	.393	.076	.176	5.143	.000	.810	1.235
UKU	.070	.077	.029	.918	.359	.929	1.077
LMU	-.064	.050	-.039	-1.266	.207	.973	1.028
KUL	.097	.024	.125	3.972	.000	.954	1.048
BJM	.578	.070	.270	8.308	.000	.894	1.119
TRK	1.086	.049	.722	22.137	.000	.888	1.126

a. Dependent Variable: LPK

- a. This constant value of -0.162 indicates that if the independent variable is constant or zero, the LPK is -0.162,
- b. The JPP regression coefficient is 0.088, this means that at every increase of 1 JPP unit with the assumption that other variables remain or do not change (ceteris paribus), the LPK will increase by 0.088. This result is significant because it has a sig value of less than 0.05, namely 0.018. **Ha accepted**,

- c. The LBP regression coefficient is 0.393, this states that for every increase of 1 LBP unit with the assumption that other variables remain or do not change (*ceteris paribus*), the LPK will increase by 0.393. This result is significant because it has a sig value of 0.000. **Ha accepted.**
- d. The UKU regression coefficient is 0.070, this states that for each UKU of 1 unit, assuming other variables remain or do not change (*ceteris paribus*), the LPK will increase by 0.070. This result is not significant because it has a sig value above 0.05, which is equal to 0.359. **Ha is rejected.**
- e. The LMU regression coefficient is -0.064, this means that at every increase in the LMU of 1 unit, assuming other variables remain or do not change (*ceteris paribus*), the LPK will decrease by 0.064. This value is not significant because it has a sig value of more than 0.05, namely 0.207. **Ha is rejected.**
- f. The KUL regression coefficient is 0.097, this means that at every increase in KUL by 1 unit, assuming other variables remain or do not change (*ceteris paribus*), the LPK will increase by 0.097. This value is significant because it has a sig value of less than 0.05, namely 0.000. **Ha accepted.**
- g. The BJM regression coefficient is 0.578, this means that at every increase in BJM of 1 unit, assuming other variables remain or do not change (*ceteris paribus*), the LPK will increase by 0.578. This value is significant because it has a sig value of less than 0.05, namely 0.000. **Ha accepted.**
- h. The TRK regression coefficient is 1.086, this means that at every increase in TRK by 1 unit, assuming other variables remain or do not change (*ceteris paribus*), the LPK will increase by 1.086. This value is significant because it has a sig value of less than 0.05, namely 0.000. **Ha accepted.**

Moderated Regression Analysis

This is to determine whether the SAK EMKM variable is a variable capable of moderating the influence of entrepreneur perceptions on the presentation of financial statements.

1. JPP Moderation Regression Analysis against LPK

The results of moderation regression analysis of the effect of education level (JPP) on the presentation of company financial statements (LPK) which are moderated by SAK EMKM can be seen in table 5.

Table 5: Results of JPP Multiple Regression Analysis on LPK
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.114	.232		9.128	.000		
JPP	-.045	.085	-.040	-.530	.597	.475	2.106
SAK	-.064	.121	-.077	-.529	.597	.129	7.762
JPPSAK	.155	.038	.669	4.068	.000	.100	10.042

a. Dependent Variable: LPK

The JPP variable has a coefficient of -0.045 with a sig value of 0.597, as well as the SAK coefficient of -0.064 with a sig value of 0.597, indicating that the two variables have no influence on the perception of the presentation of LPK. Meanwhile, the JPPSAK variable, which is the moderating variable between JPP and SAK, has a coefficient of 0.155 with a sig value of 0.000 indicating that the moderating variable has an influence on LPK. This shows that SAK does not moderate JPP.

2. LBP Moderation Regression Analysis of LPK

The results of moderation regression analysis of the effect of educational background (LBP) on the presentation of company financial reports (LPK) which are moderated by SAK EMKM can be seen in table 6.

Table 6: Results of LBP Multiple Regression Analysis on LPK
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.116	.358		5.909	.000		
LBP	-.022	.179	-.010	-.120	.904	.395	2.535
SAK	-.064	.170	-.495	-2.435	.016	.061	16.307
LBPSAK	.336	.073	1.068	4.626	.000	.048	21.023

a. Dependent Variable: LPK

The LBP variable has a coefficient of -0.022 with a sig value of 0.904, likewise the SAK coefficient of -0.064 with a sig value of 0.016 indicates that SAK has an influence on LPK. While the LBPSAK variable which is the moderating variable between LBP and SAK has a coefficient of 0.336 with a sig value of 0.000 indicating that the moderating variable has an influence on LPK. This shows that SAK does not moderate LBP.

3. Analysis of UKU Moderation Regression to LPK

The results of moderation regression analysis of the effect of business size (UKU) on the presentation of company financial statements (LPK) which are moderated by SAK EMKM can be seen in table 7.

Table 7: Results of UKU Multiple Regression Analysis on LPK
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.136	.281		7.604	.000		
UKU	-.151	.193	-.063	-.785	.433	.451	2.216
SAK	.130	.137	.156	.949	.344	.108	9.292
UKUSAK	.208	.091	.404	2.278	.024	.093	10.795

a. Dependent Variable: LPK

The UKU variable has a coefficient of -0.151 with a sig value of 0.433, a SAK coefficient of 0.130 with a sig value of 0.344 indicating that the two variables have no influence on LPK. Meanwhile, the UKUSAK variable which is the moderating variable between UKU and SAK has a coefficient of 0.208 with a sig value of 0.024, indicating that the moderating variable has an influence on LPK. However, because the UKU variable was not significant it indicated that SAK did not moderate UKU.

4. Analysis of LMU Moderation Regression to LPK

The results of the moderation regression analysis of the effect of length of business (LMU) on the presentation of company financial statements (LPK) which are moderated by SAK EMKM can be seen in table 4.8.

Table 8: Results of LMU Multiple Regression Analysis on LPK
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	1.966	.261		7.536	.000		
LMU	-.022	.121	-.014	-.185	.853	.513	1.948
SAK	.635	.128	.761	4.957	.000	.124	8.076
LMUSAK	-.098	.059	-.277	-1.672	.096	.106	9.400

a. Dependent Variable: LPK

The LMU variable has a coefficient of -0.022 with a sig value of 0.853, likewise the SAK coefficient of 0.635 with a sig value of 0.000 indicates that SAK has an influence on LPK. Meanwhile, the LMUSAK variable, which is the moderating variable between LBP and SAK, has a coefficient of -0.98 with a sig value of 0.096, indicating that the moderating variable has no effect on LPK. This indicates that SAK does not moderate the LMU.

5. Regression Analysis of KUL Moderation to LPK

The results of moderation regression analysis of the effect of Report Quality (KUL) on the presentation of company financial statements (LPK) which are moderated by SAK EMKM can be seen in table 4.9.

Table 9: Results of Multiple Regression Analysis of KUL against LPK
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	3.105	.622		4.994	.000		
1 KUL	-.123	.064	-.158	-1.915	.047	.420	2.378
SAK	.466	.282	.559	1.653	.100	.025	39.641
KULSAK	-.005	.029	-.055	-.160	.873	.025	40.312

a. Dependent Variable: LPK

The KUL variable has a coefficient of -0.123 with a sig value of 0.047, as well as a SAK coefficient of 0.466 with a sig value of 0.100, indicating that SAK has an influence on LPK. While the KULSAK variable, which is the moderating variable between KUL and SAK, has a coefficient of -0.005 with a sig value of 0.873, indicating that the moderating variable has no effect on LPK. This shows that SAK moderates KUL.

6. Regression Analysis of BJM Moderation to LPK

The results of moderation regression analysis of the effect of the amount of guarantee (BJM) on the presentation of company financial statements (LPK) which are moderated by SAK EMKM can be seen in table 10.

Table 10: Results of BJM Multiple Regression Analysis on LPK
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	2.123	.231		9.173	.000		
1 BJM	-.111	.169	-.052	-.660	.510	.418	2.392
SAK	-.132	.124	-.158	-1.062	.289	.118	8.510
BJMSAK	.370	.082	.766	4.524	.000	.091	11.037

a. Dependent Variable: LPK

The BJM variable has a coefficient of -0.111 with a sig value of 0.510, as well as the SAK coefficient of -0.132 with a sig value of 0.289, both variables show no influence on LPK. Meanwhile, the variable BJMSAK, which is a moderating variable between BJM and SAK, has a coefficient of 0.370 with a sig value of 0.000 indicating that the moderating variable has an influence on LPK. This shows that SAK does not moderate BJM.

7. TRK's Moderation Regression Analysis of LPK

The results of moderation regression analysis of the effect of Credit Terms (TRK) on the presentation of company financial statements (LPK) which are moderated by SAK EMKM can be seen in table 11.

Table 11: Results of TRK's Multiple Regression Analysis on LPK
Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.830	.150		5.533	.000		
1 TRK	.784	.080	.521	9.807	.000	.419	2.388
SAK	-.051	.077	-.061	-.664	.507	.139	7.193
TRKSAK	.141	.033	.464	4.245	.000	.099	10.109

a. Dependent Variable: LPK

Variabel TRK memiliki koefisien 0.784 dengan nilai sig 0.000, demikian pula dengan koefisien SAK sebesar -0.051 dengan nilai sig 0.507 menunjukkan bahwa SAK tidak memiliki pengaruh terhadap LPK. Sedangkan variabel TRK SAK yang merupakan variabel moderasi antara TRK dan SAK memiliki koefisien 0.141 dengan nilai sig 0.000 menunjukkan bahwa variabel moderasi memiliki pengaruh terhadap LPK. Hal ini menunjukkan bahwa SAK mampu memoderasi TRK.

Discussion

Based on the research results, it can be seen that **entrepreneur perceptions as measured by using the level of education and educational background have a positive and significant effect on the presentation of the company's financial statements.** These results are in line with research conducted by Bornheim and Herbeck (1996). Knowledge about accounting and the usefulness of financial reports is mainly obtained when a person takes an education majoring in accounting. Entrepreneurs with accounting backgrounds are believed to have better perceptions about SAK EMKM than entrepreneurs with non-accounting educational backgrounds.

The results of this study are not in line with the research conducted by Amburgey et al. (1993) and Henderson (1999), in Anderson and Eshima (2011) which show that age, business size and business age have a positive and significant effect on the presentation of financial statements. The results of this study are not in line with the research conducted by Das and Dey (2005) which shows that there is a positive relationship between the age of SMEs and the frequency of doing regular bookkeeping. In this study, the size of the business and the length of business had no significant effect on the presentation of financial statements. This is because the businesses sampled have an average age of 2 years, so it can be ascertained that new companies make financial reporting on average for only two periods.

Furthermore, this study is in line with research conducted by Bass and Schrooten (2006) where the size of the guarantee affects the presentation of financial statements. This is because one of the information that banks use in lending is using information related to assets that can be used as collateral. Likewise, the credit term (credit term) also has a significant effect on the presentation of the company's financial statements.

The knowledge of entrepreneurs regarding SAK EMKM does not necessarily affect the presentation of financial statements made by the company. The results of the moderation regression analysis show that only the quality and credit terms variables are moderated by the knowledge of entrepreneurs about SAK EMKM.

Conclusion

Based on the research results, the following conclusions can be drawn:

1. The latest education level has a positive and significant impact on the perceptions of entrepreneurs regarding the presentation of financial statements.
2. Educational background has a positive and significant influence on the perceptions of entrepreneurs regarding the presentation of financial statements.
3. The size of the business does not have a significant effect on the perceptions of entrepreneurs regarding the presentation of financial statements.

4. The length of time the business has been established does not have a significant effect on the perceptions of entrepreneurs regarding the presentation of financial statements.
5. The quality of financial reports has a positive and significant effect on perceptions of financial statement presentation.
6. The amount of credit guarantee has a positive and significant effect on perceptions of financial statement presentation.
7. Credit terms have a positive and significant effect on perceptions of financial statement presentation.
8. The entrepreneur's latest education level has **no effect** on the perception of the presentation of financial statements, which is moderated by the entrepreneur's understanding of SAK EMKM.
9. The educational background of entrepreneurs has **no effect** on perceptions of financial statement presentation, which is moderated by the understanding of entrepreneurs regarding SAK EMKM.
10. The size of the business has **no effect** on the perception of the presentation of financial statements which is moderated by the understanding of the entrepreneurs regarding SAK EMKM
11. Length of business has **no effect** on perceptions of financial statement presentation, which is moderated by the understanding of entrepreneurs regarding SAK EMKM
12. The quality of financial reports has a positive **effect** on the presentation of financial reports, which is moderated by the understanding of entrepreneurs regarding SAK EMKM.
13. The amount of credit guarantee does not have a positive **effect** on the presentation of financial statements, which is moderated by the understanding of entrepreneurs regarding SAK EMKM.
14. Credit terms have a positive **effect** on the presentation of financial statements, which is moderated by the understanding of entrepreneurs regarding SAK EMKM.

Suggestion

Based on the research results, the suggestions put forward are:

1. Looking for a company that has been established for more than 5 years and has implemented financial statement presentation in accordance with Indonesian GAAP for more than 2 years.
2. Expanding the factors that can influence the perceptions of entrepreneurs regarding the presentation of financial statements.

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