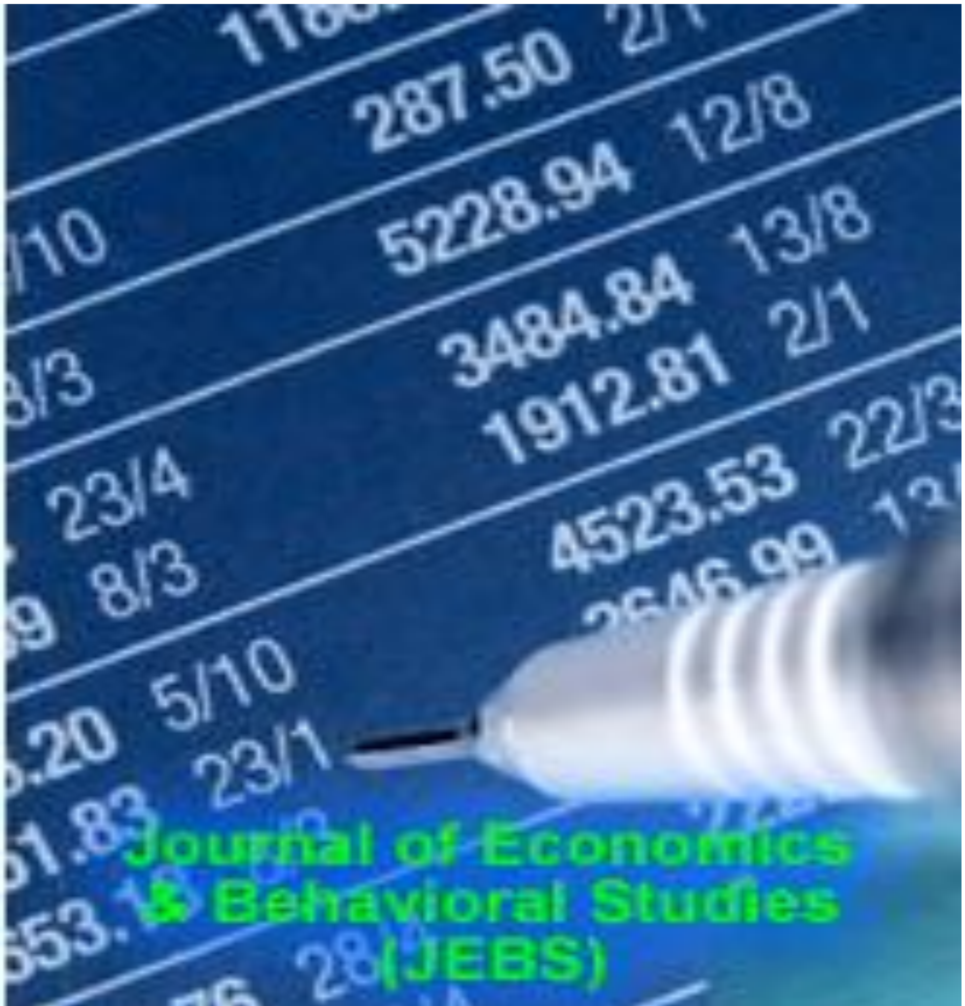

Vol. 12 No. 4 ISSN 2220-6140

Editorial

Journal of Economics and Behavioral Studies (JEBS) provides distinct avenue for quality research in the ever-changing fields of economics & behavioral studies and related disciplines. Research work submitted for publication consideration should not merely limited to conceptualization of economics and behavioral developments but comprise interdisciplinary and multi-facet approaches to economics and behavioral theories and practices as well as general transformations in the fields. Scope of the JEBS includes: subjects of managerial economics, financial economics, development economics, finance, economics, financial psychology, strategic management, organizational behavior, human behavior, marketing, human resource management and behavioral finance. Author(s) should declare that work submitted to the journal is original, not under consideration for publication by another journal, and that all listed authors approve its submission to JEBS. Author (s) can submit: Research Paper, Conceptual Paper, Case Studies and Book Review. Journal received research submission related to all aspects of major themes and tracks. All submitted papers were first assessed by the editorial team for relevance and originality of the work and blindly peer-reviewed by the external reviewers depending on the subject matter of the paper. After the rigorous peer-review process, the submitted papers were selected based on originality, significance, and clarity of the purpose. The current issue of JEBS comprises of papers of scholars from South Africa, Nigeria, Zimbabwe, Indonesia and Namibia. Towards improving project performance indicators, role of computer education in the behavioural intentions to use information technology, profitable pricing strategy for rural women indigenous chicken breeders, determinants influencing the level of corruption in local governments, COVID-19 outbreak and behavioral maladjustments, effect of capital structure, liquidity, and company size towards profitability, implementation of accrual basis accounting in local government, investigating the effects of government expenditure and money supply on unemployment, factors affecting the local governments financial performance and policy coordination and outcomes: theoretical perspectives and empirical evidence were some of the major practices and concepts examined in these studies. Current issue will therefore be a unique offer where scholars will be able to appreciate the latest results in their field of expertise, and to acquire additional knowledge in other relevant fields.

Editor In Chief

Prof Dr Ijaz

Editorial Board

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Towards Improving Project Performance Indicators in South African Construction Sector

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Abstract: Despite myriad of research effort directed at improving the performance of construction projects, poor productivity, budget overruns, quality related issues, and schedule overruns have been recurring on most construction projects. As a consequence, time, cost and quality of construction, which are among the key project performance indicators (PPIs), have suffered poor performance in many construction project undertakings. While several studies have addressed these performance dependents parameters separately and collectively, the impact of political, environmental, social, technological, economical, and legal (PESTEL) related factors on the PPIs has however not been considered. The purpose of this study, therefore, is to identify PESTEL related factors, and further determine their impact on the PPIs in the South African construction industry. South African contractors, which are registered with the CIDB (Grades 5-9) were sampled and administered questionnaires to achieve the purpose of the study. The study determined that rework, poor planning, and inadequate training are most closely associated with poor performance of the PPIs. It is believed that addressing the areas of concern identified in this study would contribute to improved performance of the PPIs in South African construction, which would ultimately engender satisfaction of construction stakeholders.

Keywords: *Construction, project performance indicators, productivity.*

1. Introduction

Cost is a major consideration during project management life cycle and considered as one of the essential parameters that define project performance (Memon et al., 2011). Cost escalation experienced in the implementations of construction projects is largely associated with planning. Cost overrun denotes the escalation in the amount of money required to deliver a project considering the initial budgeted amount (Kaliba et al., 2009). Cost management is an important tool for cost effectiveness (Enshassi et al., 2010). Estimating the completion cost of construction projects is extremely problematic as a result of the complex web of cost influencing parameters inherent in the construction process (Ahiaga-Dagbui & Smith, 2014). Overrunning construction cost, sometimes results from misunderstanding among project team members (Borse & Khare, 2016). Materials cost, design and scope changes, ground conditions, size of project, type of client, and tendering method are some of the factors that result in cost overruns in construction (Ahiaga-Dagbui & Smith, 2014). Other factors that give rise to construction cost escalation include: improper planning and budgeting, poor coordination and monitoring of projects (Doloi et al., 2012), managerial incompetence, technical error in design or estimation, deception and delusion, and corruption (Ahiaga-Dagbui & Smith, 2014). Apart from cost consideration, quality is another essential parameter upon which construction project performance is measured (Alinaitwe et al., 2007). Quality improvement is an important discourse in virtually all sectors (Forsythe, 2015).

Quality is the act of meeting the expectations of customers or compliance with customers' requirements (Iyer & Jha, 2005). The determinant of project success may vary from stakeholder to stakeholder, as different project participants have their individual project objectives (Chan & Chan, 2004). However, quality is recognized as the most important tool in market competition, as it serves as a dependable license of obtaining the loyalty of customers (Dudek-Burlikowska, 2011). Some contractors are not quality management certified, thus they regrettably compromise quality management procedures (Alinaitwe et al., 2007). Construction projects, which comply with schedule of activities, usually record timeous project completion. This is, however, not the case in most projects, as many construction projects experience avoidable and unavoidable setbacks due to the uncertainties inherent in construction operations. Time overrun in the construction industry affects project clients, project contractors, and other primary and secondary stakeholders (Ameh &

Osegbo, 2011). To the clients, delay implies a loss of revenue due to lack of production facilities and rentable space (Assaf & Al-Hejji, 2006). Equally, when there are delays, contractors are likely to deploy more resources on projects, penalized for project delay, or even lose other profitable contracts because resources for the next job are tied up on delayed projects (Ameh & Osegbo, 2011). A timely project completion would help to alleviate clients' financial liability and enables them to recoup their capital investment sooner (Ng & Zhang, 2008).

The major role of project managers is to ensure that projects are completed within the predetermined time (Sambasivan & Soon, 2007). Non-value adding time (waste), constitutes approximately 35% of the available time between activities, while the time spent on value adding activities is significantly less in construction (Josephson & Chao, 2014). There is a surfeit of evidence that among the several construction-related challenges confronting developing countries, productivity is a critical issue, and the subject is key to projects success (Akogbe et al., 2015). Poor productivity in construction is commonly attributed to several influences, rather than a single factor. These influencing factors are usually dependent on one another; one factor usually results in the occurrence of others (Dai et al., 2009). Construction productivity improvement is a product of efficiency, which engenders achievement of construction project objectives (Adebowale & Fapohunda, 2015). Contractors in South Africa grapple with poor performance of the construction PPIs, which contributes to loss in construction business (CIDB, 2012). One of the major performance challenges that confront South African construction is poor productivity, which is directly related to the PPIs. Improving the PPIs in South African construction would invariably contribute to improved productivity in the South African construction sector.

Coka (2013) reports the decline of both capital and multifactor productivity (MFP) as -1.6 % and - 0.7 % respectively in the South African construction industry. Bierman et al. (2016) similarly state that South African construction labour productivity is among the lowest in developing countries. Kukoyi et al. (2020) identify the significance of cost, quality, and time by maintaining that the parameters exert a greater influence on construction project performance than other project performance indicators. Since the PPIs are major tools to drive productivity in construction, investigations into the factors that contribute to marginalizing the PPIs are essential to improve productivity in construction operations. This study, therefore, is designed to evaluate the impact of PESTEL related factors on the PPIs to propose interventions towards improving the performance of the PPIs in South African construction. Several studies have addressed these performance dependents parameters separately and collectively. The impact of PESTEL related factors on PPIs has however not been considered, which is what this study is set to achieve. The order of presentation in this study includes the following: the next section presents the performance of projects in the South African construction industry, followed by reviews of previous research works on the PPIs. The methodology adopted for the study is subsequently presented, and then the research findings are discussed. The study is concluded and recommendations are proposed based on the research findings.

2. Projects' Performance in South African Construction Sector

The construction industry is a strategic industry to nations' economies, which provides infrastructural development and shelter for economic activities to thrive (Chingara & Moyo, 2014). Although the South African government has formulated policies for performance improvement in construction, statistics have however revealed that there was a decline in South African construction activities (SA construction, 2013). The CIDB reported a study that was conducted across the nine provinces of South Africa. The study reveals that 13% of the surveyed clients were unsatisfied with the performance of contractors, 24% of the surveyed contractors were dissatisfied with the performance of clients, and 9% of the surveyed projects had levels of defects, which were regarded as inappropriate (CIDB, 2012). National Development Plan (NDP) was further initiated by the South African government with a public infrastructure investment of R 810 billion over the next few years to boost the construction industry's growth (SA construction, 2015). The government also deployed in excess of R 372 billion between 2006 and 2009 to construction as part of its infrastructural development program (The Construction sector, 2010).

These development plans make the delivery of social infrastructure increased from 1.5 million housing units in 1996 to 2.1 million by 2013. Despite these momentous investments, overruns, poor productivity and quality related problems are subjects of concern in most South African construction projects (Cottle, 2014).

The South African Workforce Management Group Adcorp (WMGA) estimated that labour marginal productivity in the South African construction industry has been poor for the last four decades (Chingara & Moyo, 2014). To ensure and retain clients' satisfaction, the requirements and expectations of clients must be understood by their service providers. For more than two decades, South African construction is confronted with unique performance challenges and deliberate efforts are being made on a broad front to address these challenges (Ofori et al., 1996). The challenges in the South African construction sector have been a long-lasting issue, while there is evidence to establish the existence of these challenges (Windapo & Cattell, 2013). Windapo and Cattell (2013) posit that some of the challenges confronting the performance of the South African construction sector are public sector capacity, technology, site conditions, statutes and regulations.

An increase in the cost of material, access to available mortgage / credit and interest rate, and poverty. Research undertaken relative to labour and work conditions in South Africa construction report the negative impact of community liaison officers and ward councilors. In public sector contract as a major factor militating against performance in South African construction (CIDB, 2015). The study identifies industrial action as one of the major factors affecting the performance of the South African construction sector as a result of significant production delays due to the number of man-days lost. Ugwu and Haupt (2007) state that the challenge of poor project performance is more severe in emerging economies, which require considerable infrastructural projects to stimulate economic growth. Ugwu and Haupt (2007) further elucidate that the poor performance of construction projects in developing economies stems from the reality that developing countries give more priority to poverty alleviation, institutional strengthening, capacity utilization building, and socio-cultural dimensions that sustain harmony and co-existence. The South African construction industry is expected to play a decisive role in the country's bid to achieve rapid socio-economic development through improved projects performance (Ofori et al., 1996). The factors that impact on project performance are rarely constant from country to country and even project to project, depend on the circumstances involved in the project. There are however essential indicators, which are primary to the survival of any organization including those in the construction sector. These indicators, which are recognized as the PPIs in this study are examined.

Cost Indicator: The effective implementation of a construction project by keeping the execution under the control of the predetermined cost is reliant on an approach that requires sound engineering judgments (Enshassi et al., 2010). Proper monitoring of the financial activities of any project is therefore essential to prevent the prospective danger of cost overruns. Despite the awareness of the need for cost control, it is uncommon to see a construction project achieve its objective on effective cost delivery (Memon et al., 2011). In an industry such as automotive, policies to develop a long-term cost effective business has been developed (Josephson & Lindstrom 2014). In prioritising the reduction of defects and disturbances related to projects, several organizations keenly oversee their projects and ensure they shorten lead times (Josephson and Chao, 2014). Zimina et al. (2012) state that the right approach to target costing is to ensure that cost and value are the drivers of the design process rather than determining the cost after completion of the design. According to Enshassi et al. (2010), cost overrun is more rampant in the traditional or adversarial form of contract where contracts are awarded to the lowest bidder particularly in developing nations. Aibinu and Jagboro (2002) indicate that the conventional approach to managing the extra cost include a percentage (5% - 10%) of the project cost as a contingency in the pre-contract budget.

Quality Indicator: The quality of production is expected to be improved through the implementation of Quality Management System (QMS) such as Total Quality Management (TQM), Six Sigma, ISO 9001 or excellence models and also applying the associated tools and techniques (Aichouni et al., 2014). Aichouni et al. (2014) state that large and small corporations have adopted QMS, which has proven to be effective. Quality Function Development (QFD) is another strategy the manufacturing industry employs to identify customers' needs and convert the need into product characteristics (Delgado-Hernandez et al., 2007). Official statistics have proven that productivity in the construction industry grows more slowly than productivity in the manufacturing industry (Sezer & Brochner, 2014). Adebowale and Smallwood (2020) maintain that construction productivity improvement would contribute to lowering construction cost. Kukoyi and Smallwood (2017) identify poor productivity, accidents on site, non-value adding activities, and absenteeism as major factors, which give rise to cost of construction. The process of quality control in the construction industry should begin with making quality.

Management programs that are based on construction documents (Chen & Luo, 2014). Chen and Luo (2014) state that these programs should explicitly state the quality of material and equipment, the acceptance standards of work and tests to be performed. Simpeh and Shakantu (2020) explore quality in terms of functionality of construction facilities. The study reported inadequacies in facilities in higher institutions of learning. Some of the required facility are missing, while some were found to be underperforming (Simpeh et al., 2014). These documents are arguably available but the industry players still grapple with implementation problem. Viable quality management system in construction will contribute to improving the performance of PPIs in the industry (Kazaz et al., 2008). Low quality materials engenders higher construction cost (Memon et al., 2011). Chen and Luo (2014) state that one of the difficulties in quality management is that the current focus of quality control is the final component with less attention given to quality control during the process of construction. Chen and Luo (2014) expound that the inadequate understanding of quality codes contributes.

Time Indicator: Delays in construction can be reduced by identifying the underlying causes and appropriating preventive measures against the identified causes. Khoshgoftar et al. (2010) state that site investigations is a necessary measure needed in order to better manage delays and to mitigate its resulting consequences. Lead time should be well managed from the beginning to the delivery of construction work. Typically, a project is broken down into activities to which resources can be assigned, durations and costs estimated. The activities are linked according to work sequences to form a network. Critical path method (CPM) is used to analyze the network to identify critical path(s) and project duration (Choudhury, 2009). Shorter lead times are aimed at reducing construction time and increase competitiveness. Josephson and Chao (2014) state that sufficient time is needed to avoid future problems. Completing projects on time is a pointer to efficiency; however, the construction process is subject to several variables and capricious factors. There are different categories of delays attributed to construction project delivery. Many researchers have identified the forms of delay in construction project execution process as; excusable delays, non-excusable delays and concurrent delay (Abdul-Rahman et al., 2008, Enshassi et al., 2010). Excusable delays result from unforeseen factors outside the control of contractor and are not attributed to contractors' negligence (Akinsiku & Akinsulire, 2012). Such delays stem from force majeure, extremely inclement weather, civil commotion, industrial unrest (Ameh & Osegbo, 2011). Contractor is not responsible for this type of delay (Arditi & Pattanakitchamroon, 2006, Enshassi et al., 2010).

To quality problems in the construction sector unfortunately, construction organizations, workers, and the general public have lost billions of dollars to the bad quality of work and unsafe work conditions (Loushine et al., 2006). Therefore, this necessitates the need for improvement in product quality, business results and customers' satisfaction (Aichouni et al., 2014). Ameh and Osegbo (2011) state that project contractors are responsible for the risk associated with schedule overruns on matters related to low labour productivity stemming from inadequate scheduling or mismanagement, construction mistakes, equipment breakdowns and staffing problems. Delay is said to be concurrent when two or more delay events arise concurrently, while the effects of the delays are felt at the same time (Enshassi et al., 2010). A delay may occur simultaneously with other delays, which sometimes contribute to the formation of other delays (Arditi & Pattanakitchamroon, 2006). Borse and Khare (2016) attribute the occurrence of time overruns on construction projects to factors such as design errors, unexpected site conditions, increases in project scope, weather conditions, and other project changes. Abisuga et al. (2014) differ that the underlying causes of delay can be associated with project stakeholders (clients, contractors, subcontractors, consultants) and external factors such as statutory agencies. Aibinu and Jagboro (2002) posit that contractors and clients jointly or severally contribute to the inability to complete a construction project within the stipulated contract period. Khoshgoftar et al. (2010) expound that delays occur between the clients and contractors due to problems arising from contractual arrangements. According to Memon et al. (2011), the number of change order, financial constraints and owners' lack of experience in construction are the main causes of delays.

Construction Productivity: Construction organizations operate within an environment that consistently changes (Enshassi et al., 2010). There is no single definition that can entirely describe productivity in a complex sector like the construction industry (Rane et al., 2017). Nasir et al. (2014) opine that the reason for this is because different inputs and outputs are involved in different projects and organizations. For equipment-intensive construction operations, productivity is defined as output / input (i.e. m^3 / h for excavation works). Conversely, the subject is defined as input / output (i.e. 0.50h / m^2 for wall formwork operations) for labour intensive construction operations (Panas & Pantouvakis, 2010). Both output and input usually have cost implications (Rivas et al., 2011). The construction industry is usually characterized by poor productivity (Adebowale & Fapohunda, 2015).

The industry is complex in its nature as it comprises large numbers of stakeholders such as clients, contractors, consultants, and regulators (Enshassi et al., 2010). Management of these diverse construction stakeholders is challenging as they are usually from different disciplines and organizations, which can constitute a major obstacle to projects success. The general emphasis on the need for construction productivity improvement is widely centered on its contributions to nations' economy and satisfaction of construction projects' stakeholders (Odesola & Idoro, 2014). A number of factors have been identified to militate against productivity growth in construction. Adebowale and Smallwood (2020) determined that inadequate workers' skills represent the most critical factor that influence productivity growth in construction. The pursuit of stakeholders' satisfaction and economic growth has therefore increase the interest of academics and industry practitioners on the need for construction productivity improvement.

3. Research Methodology

A quantitative research method was used to achieve the objectives of the study. 523 questionnaires were distributed to contractors in the Eastern Cape, Gauteng, Kwazulu-Natal, and Western Cape provinces of South Africa. These provinces were chosen because of their high construction capital outlay. Contractors from these provinces were drawn and the sample size was determined. First, a pilot study was conducted to enhance the validity of the questionnaire. The pilot survey conducted preceded the primary study and spanned over a period of one month. Through a convenient sampling technique, site managers and site engineers were selected on construction sites in Port Elizabeth, Eastern Cape province. After the pilot survey, the research questionnaire was modified to accommodate the input of participants. The modification improves the instrument for the primary survey. Respondents were informed about the study and their consent was sought before the questionnaires were distributed. The scale adopted was 1 (minor) to 5 (major), while an option of selecting 'unsure' was provided should respondents be uncertain with respect to a question. From the 523 questionnaires distributed, 96 questionnaires were retrieved and were captured for analysis.

0.70 reliability value was obtained after a Cronbach alpha coefficient reliability tests was conducted. According to Dane (2011), a correlation value of 0.70 is considered sufficient. The data collected was analyzed using the statistical package SPSS version 21 and a measure of central tendency in the form of a mean scores (MSs) was used to rank and identify significant perceptions of factors influencing the PPIs in South African construction. With respect to percentage representation of respondents on province basis, 33.3%, 28.2%, 20.8%, and 17.7% of the respondents were from the Eastern Cape, Gauteng, Western Cape, and KwaZulu-Natal respectively. 18 of the respondents were site engineers, 27 were site managers and 51 were site supervisors. Participants' organizations had an average of 22 years in the construction industry, and respondents had an average of 16 years work experience in the construction industry and an age range of 26-45 years. This suggests that respondents are adults and experienced to respond to the questionnaire. 83.3% of the respondents were male and 16.7% were females, this showed that respondents were dominated by males. The research considered contractors' perceptions because they are the key driver of production on construction sites and proficient with respect to the subject under investigation.

Contractors that are registered with the CIDB within grades 5-9 are established construction organizations and would have delivered several construction projects, therefore, contractors in this category are considered in this study. Construction site engineers, site managers, and site supervisors working for these contractors were surveyed and deemed to be capable of providing useful insights into factors that influence the PPIs in South African construction. The study population was obtained from the official page of the CIDB, and was randomly drawn except for a few conveniently sampled contractors. Microsoft Excel was used to draw the sample and a number was allotted to each of the participants contracting organizations, which enables the organizations to be sorted on a random value. The sample size of each province was obtained as randomly generated in Microsoft Excel. The research questionnaires were distributed to participant organizations through the internet, while completed questionnaires were retrieved through the same medium. Anonymity of respondents was assured through a duly signed consent and an introduction letter. The letter documented the purpose of the research and was distributed to participants' organizations together with the research questionnaires.

4. Discussion of Results

Respondents' Information: Tables 1-3 present the information of construction workers who participated in the study. Table 1 presents the qualifications of study respondents. The table reveals that 6.2% of surveyed respondents have a Master degree, 7.5% a Honors degree, 36.3% a Bachelor degree, 37.5% a Diploma certificate, 7.5% a Matric certificate, and 5% have a Trade certificate. The table suggests that majority of survey respondents have Barchelor degrees and Diploma certificates.

Table 1: Qualifications of Respondents

Qualification	No	%
Master degree	5	6.2
Honours	6	7.5
Bachelor degree	29	36.3
Diploma	30	37.5
Matric	6	7.5
Trade certificate	4	5.0
Total	80	100.0

Table 2 reveals the three categories of construction workers that participated in the study. They include: site engineers, site managers and site supervisors. 21.2% of the respondents were` site engineers, 48.8% were site managers, and 30% were site supervisors. Site managers predominate with regards response rate, follow by site supervisors, while the study record the least response from site engineers.

Table 2: Occupations of Respondents

Respondents	No	%
Site engineer	17	21.2
Site manager	39	48.8
Site supervisor	24	30.0
Total	80	100.0

Table 3 presents the range of years that respondents have worked in the construction industry. 20.0% of respondents have experience ranging from 0-5 years, 18.8% respondents have 6-10 years of construction experience, 15.0% have worked in construction for 11-15 years, respondent that have worked in construction for 16-20 years constitute 18.8%, then 21-26 years (3.27%), followed by 26-30 years (3.7%) while 20.0% respondents have more than 30 years of construction experience. These suggest that the respondents have the required site experience to understand the factors affecting the PPIs in South African construction.

Table 3: Experience of Respondents

Years	No	%
0-5	16	20.0
6-10	15	18.8
11-15	12	15.0
16-20	15	18.8
21-26	3	3.7
26-30	3	3.7
>30	16	20.0
Total	80	100.0

Table 4 reveals the extent to which PESTEL factors influence the PPIs identified in the study. With respect to the PPIs, the results revealed that rework, poor planning, non-achievement of production targets, inadequate training, shortage of construction resources, disputes in construction, poor constructability of designs, and political related factors were the order of major factors, which influence cost performance in South African construction. Some studies determined that the occurrence of cost overruns is usually as a result of the misunderstanding between project team members, improper planning and budgeting, poor coordination and monitoring of the projects (Borse & Khare, 2016; Doloi et al., 2012). Respondents perceived the order of factors that exert negative influence on the quality of construction projects as inadequate training, rework, poor constructability of designs, and poor planning. Chen and Luo (2014) note that one of the difficulties in quality management is that the current focus of quality control is the final component with less attention given to quality control during the process of construction.

Chen and Luo (2014) further maintain that the inadequate understanding of quality codes contributes to quality problems in the construction sector. In terms of time performance, rework, poor planning, shortage of construction resources, inadequate training, non-achievement of production targets poor constructability of designs, political related factors, and disputes in construction were the order of major time influencing factors. Abisuga et al. (2014) note that the factors that affect time performance can be associated with project stakeholders (clients, contractors, subcontractors, consultants) and external factors such as statutory agencies. Khoshgoftar et al. (2010) state that delays occur between the clients and contractors due to problems arising from contractual arrangements. Relative to the mean scores (MS) of the PESTEL related factors in table 4, it can, therefore, be construed that the factors were very important to the PPIs. The results revealed a considerable relationship between productivity, cost and time as opposed to the relationship between productivity and quality.

In relation to the MSs, the four most significant quality influencing factors are highly rated as essential to productivity, cost and time. This suggests that quality is only related to productivity to some extent, while cost and time are related to productivity to a very large extent. The average MSs of the extent to which the identified factors influence PPIs are computed. Based on the results obtained, half of the factors have mean MSs > 3.40 ≤ 4.20, and the other half have mean MSs > 2.60 ≤ 3.40. These suggest that some of the factors have a major influence on the PPIs. These factors include: rework, poor planning, inadequate training, non-achievement of production targets, poor constructability of designs, and shortage of construction resources. It can further be construed that the remaining factors have a lesser influence on the PPIs. These factors include: disputes in construction, political related factors congestions on sites, unfavorable social economic conditions, poor working environments, and unfavorable welfare conditions. Considering the mean value of the PESTEL factors, it is deemed that all the factors are relevant to the PPIs.

Table 4: Influence of PESTEL Factors on the PPIs

Factor	PPIs (MS) Productivity	Cost	Quality	Time	Average MSs	Rank
Rework	3.89	4.14	3.73	4.28	4.01	1
Planning	3.77	3.81	3.56	3.98	3.78	2
Inadequate training	3.69	3.53	3.76	3.77	3.69	3
Non-achievement of production targets	3.54	3.59	3.38	3.65	3.54	4
Poor constructability of designs	3.43	3.42	3.61	3.63	3.52	5
Shortage of construction resources	3.46	3.52	2.95	3.93	3.47	6
Disputes in construction	3.43	3.46	3.09	3.47	3.36	7
Political related factors	3.53	3.41	2.84	3.54	3.33	8
Unfavorable socio-economic conditions	3.39	3.15	2.8	3.09	3.11	9
Poor working environments	3.14	3.18	3	3.11	3.11	10

Congestion	3.04	3.15	2.97	3.28	3.11	11
Unfavorable welfare conditions	3.01	3.19	2.89	2.95	3.01	12

An analysis of variance (ANOVA) test was conducted to obtain possible statistically significant difference of respondents' perceptions relative to the influence of PESTEL-related factors on the PPIs. As three (3) occupation means were involved, ANOVA was deemed appropriate to reduce the chances of Type 1 error, since ANOVA analyses differences between all conditions means simultaneously. The mean difference for each factor was deemed significant at the 0.05 level. Based on the p-values obtained in table 5, respondents largely differ in their perceptions of factors that influence the PPIs. The result suggests that respondents' perceptions of factors influencing the PPIs differ with respect to construction productivity, cost, and quality, which have p-values of 0.514, 0.204, and 0.219 respectively. However, the perceptions of respondents with respect to construction time are statistically significant at the 0.049 level, which implies that respondents' perceptions relative to factors impacting on construction time are largely consistent.

Table 5: ANOVA of PESTEL Influence on PPIs

PPIs		Sum of Squares	Mean Square	F	p-Value
Productivity	Between Groups	1.072	0.536	0.670	0.514
	Within Groups	73.644	0.800		
	Total	74.716			
Cost	Between Groups	3.033	1.516	1.620	0.204
	Within Groups	86.132	0.936		
	Total	89.165			
Quality	Between Groups	3.037	1.518	1.544	0.219
	Within Groups	90.459	0.983		
	Total	93.496			
Time	Between Groups	5.417	2.709	3.121	**0.049**
	Within Groups	79.854	0.868		
	Total	85.271			

* The mean difference is significant at the 0.05 level

Further analysis in the form of Tukey HSD test was conducted for multiple comparisons of respondents' perceptions on PESTEL-related factors influences on the PPIs. The results obtained relative to productivity, cost, and quality imply that the influence of PESTEL-related factors on these PPIs is not statistically significant. This result is consistent with the one obtained in the ANOVA test. However, time, has earlier proven to be statistically significant at the 0.049 level with the interpretation that PESTEL-related factors significantly influence construction time. Table 6 reveals that site supervisors and site mangers have largely contributed to the p-value of construction time achieving statistical significance.

Table 6: Tukey HSD Multiple Comparisons of Respondents' Perceptions

PPIs	Dependent Variables		Mean	Standard Error	p-Value
Productivity	Site supervisor	Site manager	0.19669	0.21195	0.624
		Site engineer	-0.03680	0.27030	0.990
	Site manager	Site supervisor	-0.19669	0.21195	0.624
		Site engineer	-0.23349	0.24659	0.612

	Site engineer	Site supervisor	0.03680	0.27030	0.990
		Site manager	0.23349	0.24659	0.612
	Site supervisor	Site manager	0.41251	0.22922	0.175
		Site engineer	0.25573	0.29232	0.657
Cost	Site manager	Site supervisor	-0.41251	0.22922	0.175
		Site engineer	-0.15678	0.26668	0.827
	Site engineer	Site supervisor	-0.25573	0.29232	0.657
		Site manager	0.15678	0.26668	0.827
	Site supervisor	Site manager	0.33175	0.23491	0.339
		Site engineer	-0.06043	0.29957	0.978
Quality	Site manager	Site supervisor	-0.33175	0.23491	0.339
		Site engineer	-0.39218	0.27330	0.327
	Site engineer	Site supervisor	0.06043	0.29957	0.978
		Site manager	0.39218	0.27330	0.327
	Site supervisor	Site manager	.53188*	0.22071	**0.047**
		Site engineer	0.17785	0.28146	0.803
Time	Site manager	Site supervisor	-.53188*	0.22071	**0.047**
		Site engineer	-0.35403	0.25678	0.356
	Site engineer	Site supervisor	-0.17785	0.28146	0.803
		Site manager	0.35403	0.25678	0.356

* The mean difference is significant at the 0.05 level.

5. Conclusion and Recommendations

During the delivery of construction projects, the significance of the PPIs identified in this study cannot be overemphasized. While the PPIs are different, improved or poor performance of one of the indicators would influence the performance of others. Based on the findings of this study, the major factors that influence the PPIs in South African construction are rework, poor planning, and inadequate training. The study further determined that respondents' perceptions of factors influencing the PPIs differ with respect to construction productivity, cost, and quality. However, their perceptions are largely consistent with respect to factors impacting on construction time. Consequently, the study recommends adequate supervision and effective training of construction employees. This will mitigate the rate of construction rework and also helps to improve the skills of construction workers.

As long as the construction sector remains labor-intensive, development and monitoring of human capital is essential for modern construction projects. Adequately trained workers would demonstrate high competence in projects execution, which would further reduce rework in construction. Furthermore, construction organizations should consider evolving effective planning programs. Based on the nature, type, and complexity of construction projects, some of what should be considered in the planning programs include; appropriate planning tools, accessibility of resources required for project implementation, selection of appropriate technology, weather conditions, duration and relationship between activities, health and safety measures, and other intrinsic and extrinsic project performance influences in construction.

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The Role of Computer Education in the Behavioural Intentions to Use Information Technology in Hospitals in Kumasi, Ghana

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Abstract: Computer education is increasing steadily because it is well-recognized as a major indicator of the successful acceptance of information technology applications in an organization. Despite the advantages associated with computer education, there is a relative scarcity of empirical studies on the potential role of computer education in the behavioural intentions of staff to use information technology applications, particularly in healthcare settings. Thus, this research is aimed to investigate the role of computer education to the behavioural intentions of staff to use information technology applications in the hospitals in Kumasi. Guided by Davis` technology acceptance model, five hypotheses were stated and examined through structural equation modeling. Utilizing stratified sampling, data were gathered via a survey questionnaire from a sample of 154 staff in the hospitals in Kumasi. The research revealed that computer education contributes positively to the behavioural intentions to use via the impact of perceptions of ease of use of technology applications in the hospitals in Kumasi. The research, therefore, recommends that the management should consider computer education in the adoption of technology systems to enhance the staff perceptions of ease of use and hence, their intentions to use to improve health care in the Metropolis.

Keywords: *Computer education, Behavioural intentions, Information technology, Hospitals.*

1. Introduction

Quality healthcare delivery remains one of the many challenges facing less developed countries, particularly in sub-Saharan Africa. As a result of this, many countries have taken several steps to enhance health infrastructure, enrolment in healthcare organizations, and information technology (IT) applications to satisfy the health needs of the populace. Information technology mainly deals with information in an electronic form which includes its accessibility, processing, storing, transporting, or transferring as well as its delivery (Laudon & Laudon, 2000). It has been highlighted that intensive adoption of IT in the healthcare delivery can improve data security, save cost and time as well as facilitate the accessibility of patients' data (Miller, Elixhauser, Zhan & Meyer, 2001). In Ghana, most health facilities are using IT to capture, store, process, and transmit data connected to patients' health or the daily activities of health professionals (MOH, 2009). Burton-Jones and Hubona (2006) pointed out that computer education plays an immense role in the successful adoption of IT applications.

The authors further contended that computer education can contribute to improving the perceived ease of use (PEOU) and perceived usefulness (PU) and hence, the volume of use of IT applications in an organization. Despite the potential role of computer education in the adoption of IT systems, there is a relative scarcity of empirical studies to evaluate the influence of computer education on the intentions of staff to use IT applications, particularly in the healthcare industry. However, similar research investigated the potential role of external factors such as computer education, age, and experience on the volume of use of information technology applications (*ibid*). Consequently, this research is set out to evaluate the impact of computer education on the behavioural intentions of staff to use IT systems in the hospitals in Kumasi Metropolis. In this respect, the paper expands the current theory on the importance of computer education to the technology acceptance models, particularly in the health care organizations. Moreover, the paper contributes to the practical knowledge of health care providers on the potential role of computer education in the acceptance of IT in the healthcare facilities in Kumasi.

2. Literature Review

Information Technology: The provision of excellent services is recognized as one of the priorities of the healthcare industry. It has been pointed out that IT provides multiple benefits to patients, healthcare providers as well as the government at large (Miller et al., 2001). The authors further noted that the adoption of IT can assist healthcare providers to access the health records of patients from all departments and units within a facility. This can offer health care providers a platform to improve on their clinical decisions, manage disease and documentation as well as the quality of time spent with patients. Stol, Ehrenfeld, and Epstein (2014) defined IT as the usage of computers and their software in managing and manipulating information. Alternatively, Laudon and Laudon (2000) stated that IT is much bigger than the traditional personal computer and network technologies which include the co-ordination of other technologies like the usage of mobile phones, television sets, etc. Johnson (2003) noted that IT was introduced into the healthcare delivery as Hospital Information Systems and Physician Management Systems in the early part of 1970, and since then it has evolved to sharing of systems. Currently, the IT infrastructure includes computer equipment, networking accessories, multi-media applications, mobile communication services, imaging, and internet systems (MOH, 2009). A nation-wide area network (WAN) has also been introduced to enhance telecommunication infrastructure in the health care units (*ibid*).

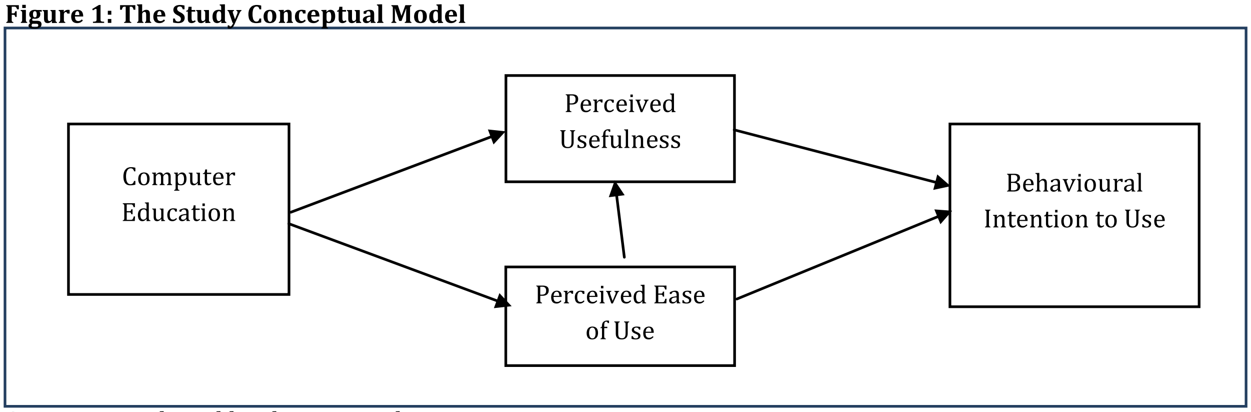
However, few of these healthcare units have introduced local area network (LAN) to provide automated financial and pharmaceutical services as well as front desk activities like registration of patients and keeping of records. Added, telemedicine is not well-developed in the healthcare system in the country. Despite these few developments in healthcare delivery, most of the IT applications have not been fully integrated in a way that will improve healthcare services in the country (*ibid)*. It has been suggested that four major factors have stifled the successful use of IT in the health services industry (Abookire et al., 2000). First, situational elements such as time and financial pressure, and unaccounted returns with regards to investment and internet which are not accessible in the offices' environment. The second relates to the cognitive and/or physical environment, which among other things includes computer illiteracy or training. Liability is another obstacle which involves confidentiality issues in the final knowledge. Finally, attitudinal factors like inadequate research, resistance to change, and ignorance of the benefits of IT applications. Kaye, Kokia, Shalev, Idar, and Chinita (2010) also suggested that business and financial, structural, cultural, technical and professionals are some of the challenges of acceptance of IT applications in the health service delivery. Finally, changes and adverse disruptions of normal clinical workflow and routine work make health professionals to reluctantly accept IT in their normal routine activities (Ajami & Arab-Chadegani, 2013).

Technology Acceptance Model*:* Extant literature indicates that technology acceptance models (TAMs) have been widely adopted to evaluate the acceptance of IT applications in many industrial settings including healthcare. Past studies also revealed that TAMs are the best models to evaluate the determinants of adoption of IT applications (dos Reis & Freitas, 2014; Noblin, Wan & Fottler, 2013). A similar study posited that TAMs can be used to model variables such as attitudes, satisfaction, predictions, and usage built on beliefs and other external factors (Al-Gahtani & King, 1999). A review of the literature also reveals that many researchers have developed different models for technology acceptance and other behaviors with regards to the usage of IT applications. However, the most important TAM which has been well-documented in the literature is Davis' (1989) TAM (Burton-Jones & Hubona, 2006; Hennington & Janz, 2007; Legris, Ingham & Collerate, 2003). According to this Model, perceived ease of use (PEOU), perceived usefulness (PU), actual system use, behavioural intention to use (BITU), and attitudes are the main elements of acceptance of IT applications. The model further indicated that user`s perceptions to accept IT applications can be explained by PEOU, PU.

Attitude towards the usage of such IT systems, PU and PEOU are influenced by external variables including political, social, and cultural elements. However, a study revealed that external factors comprising objective system design characteristics, training, computer self-efficacy, user involvement in the design, and the nature of the implementation process can also influence PEOU and PU. These external elements affect BITU and ultimately, usage indirectly through their impact on PEOU and PU (Davis & Venkatesh, 1996). Alternatively, Burton-Jones and Hubona (2006) identified some external elements consisting of computer education, age, and system experience as determinants of adoption of IT applications through the impact of PEOU and PU. In this research, however, TAM proposed by Davis (1989) was adopted because it has been widely accepted and used in many research contexts such as healthcare industry (Kijsanayotin, Pannarunothai & Speedie, 2009; Hennington & Janz, 2007; Wu, Wang & Lin, 2007); government agencies (Lean, Zailani, Ramayah & Fernando, 2009) and banking industry (AbuShanab & Pearson, 2007). Moreover, it has been asserted that Davis' model provides the best framework with well-defined variables that can enhance users` perceptions and behaviors towards IT applications (Handy, Hunter & Whiddat, 2001).

Study Conceptual Framework: Here, the purpose is to provide a narrative and graphical explanation to the key constructs used and their posited relationships (Miles & Huberman, 1994). Based on the literature review, the main constructs that are considered in the adoption of IT applications in the hospitals in Kumasi are computer education, PEOU, BITU, and PU. In this paper, computer education is operationalized as knowledge gained from IT applications. PEOU also measures how the users understand and appreciate the comfortability of working with IT applications. PU is concerned with the degree at which users appreciate the usefulness and benefits of using IT applications, whilst BITU measures the users` willingness to undertake a task to achieve targeted performance. The conceptual framework is depicted in Figure 1 below which shows that computer education is considered as an independent variable, PU and PEOU are mediating variables and BITU is regarded as the dependent variable. The level of computer education affects BITU through the mediating role of PEOU and PU. However, PEOU directly influences PU which, in turn, affects BITU.

Figure 1: The Study Conceptual Model



Source: Developed by the Researchers

Research Hypotheses: Guided by the conceptual framework, the proposed hypotheses in this research are discussed below.

Computer Education: Computer education relates to the level of knowledge users have acquired in IT applications (Burton-Jones & Hubona, 2006). In the adoption of an electronic system into any organization such as healthcare, the level of knowledge of the staff in IT should be considered. If staff possesses a certain level of knowledge and capability in IT, they will have the intention to use such a system. Zmud (1976) cited by Burton-Jones and Hubona (2006) contended that a high level of users' education positively affects their success in using IT. The author further stated that an increase in computer education would improve users' attitude and reduce anxiety, and also offer a pool of knowledge that can lead to effective and adaptive learning. It has also been highlighted that PEOU and PU are significantly influenced by computer education (Burton-Jones & Hubona, 2006). A study also indicates that an increase in the level of computer education positively influences PEOU (*ibid*). Hence, the posited hypotheses are that:
H1: *There will be a significant and direct relationship between computer education and PEOU*
H2: *There will be a significant and direct relationship between computer education and PU*

Perceived Ease of Use: PEOU relates to how the users understand and appreciate the comfortability of using IT applications (Davis, 1989). According to the author, to keep IT application usage alive and friendly, the users should have functional interfaces that are easily accessible and of simple usage. It has also been highlighted that objective usability, computer playfulness, self-efficacy, anxiety, perceived external control and enjoyment have a greater influence on PEOU (Venkatesh & Davis, 2000). The authors are also of the view that PEOU positively influences PU since an electronic system that requires less effort to use can be said to be useful. PEOU also contributes to increasing users' BITU. This is because the less effortful the usage of IT is, the more the users would exhibit a positive attitude towards it. Prior research also revealed that PU is positively affected by PEOU of IT applications (*ibid*). Consequently, the following hypotheses are stated:
H3: *There will be a significant and direct relationship between PEOU and BITU*
H4: *There will be a significant and direct relationship between PEOU and PU*

Perceived Usefulness: PU measures how well the usage of a particular electronic application can improve job performance (Surendran, 2012). It has also been pointed out that social and cognitive variables can influence the PU of the IT system (Venkatesh & Davis, 2000). The cognitive variables include output quality, job relevance, PEOU, and result demonstrability, whilst the social variables are the social norm, image, and voluntariness. However, PU is well-recognized as a dominant indicator of BITU (Venkatesh & Davis, 2000; Surendran, 2012). Past research also found that PU enhances BITU (Venkatesh & Davis, 2000). Consequently, the hypothesis stated is that:
H5: *There will be a significant and direct relationship between PU and BITU*

Behavioural Intentions to Use: BITU relates to the preparedness of a person to work with an IT application (Surendran, 2012) to achieve a performance target. BITU is recognized as a major determinant of the adoption of IT applications in an organization. Studies in psychology and TAM revealed that BITU is a key determinant of actual system usage. It has also been suggested that PEOU and PU influence BITU through the mediated effect of users` attitudes towards IT applications (Davis, 1989; Venkatesh & Davis, 2000). Ajzen (1991) also pointed out that the greater the intention to put up behaviour, the more likely it will be performed. Moreover, if staff thinks that the adoption of technology application is very useful in his line of duty, he will intuitively have an intention to use it. Furthermore, if the staff has a positive attitude towards the usage of the IT system, his intention to use would increase (*ibid*).

3. Research Methodology

Scale Items Development: Here, the methods used to achieve the aim and for that matter, the research hypotheses are discussed below. This paper utilized survey questionnaires with five Point-Likert Scale where (1) represents strongly agree and (5) strongly disagree with the view to obtaining the healthcare professionals' perceptions on the level of computer education, BITU, PU, and PEOU. Three scale items were developed to measure computer education, six for PU, four for PEOU, whilst four for BITU were taken from Peker (2010) and adapted. The research used survey questionnaires because the data generated allow for better mathematical calculations and interpretations (Creswell, 2014; Mackenzie & Knipe, 2006).

Sample and Data Collection Procedure: The study targeted nine (9) hospitals out of which five (5) were public and four (4) were private hospitals in the Metropolis (KMA, 2018). Three (3) of these hospitals (2 public and 1 private) were purposively selected because they had full computerized IT applications. These hospitals were Kwame Nkrumah University of Science and Technology (K.N.U.S.T), Kwadaso Seventh Day Adventist (S.D.A), and Kumasi South hospitals. According to the 2018 staff records of these hospitals, 255 health professionals utilized IT applications. Out of this number, one hundred and ten (110), one hundred (100) and forty-five (45) worked at K.N.U.S.T, Kwadaso S. D. A., and Kumasi South hospitals respectively. Guided by Krejcie and Morgan (1970) sample size model, 154 health professionals who utilized IT applications were included in the study. Besides, a stratified sampling procedure was employed to pick the respondents. This procedure allows the population to be divided into separate groups. A simple random sampling is then utilized to draw elements from each group (Malhotra & Birks, 2007). This sampling method was used to ensure that each segment of the population is fairly represented in the sample selection procedure (*ibid*).

Research Results: A total of 154 distributed questionnaires were received but 7 were found to be incomplete. One hundred and fifty-four (154) questionnaires were distributed face-to-face to the healthcare professionals and other allied professionals in the three selected hospitals in the Metropolis. Sixty-seven (67), sixty (60), and twenty-seven (27) questionnaires were distributed to the respondents from the K.N.U.S.T, Kwadaso S.D.A and Kumasi South hospitals respectively. The profile of the research participants shows that out of a sample of 146, 67 (47.2%) were male and 75 (52.8%) were female. Also, 61 (41.8%) were between the age of 20 and 30 years, 65 (44.5%) was at the age of 30-40 years, 15 (10.3%) were between the age of 41 and 50 years and 5 (3.4%) was at the age of 51-60 years. Moreover, 7 (5%) had a high school education, 42 (29.8%) had diploma education, 25 (17.7%) had a first degree and 67 (47.5%) had a post-graduate degree. Finally, 19 (13%) of the respondents were physicians, 45 (30.8%) were nurses/midwives, 12 (8.2%) were pharmacists, 22 (15.1%) were administrators, 20 (13.7%) were laboratory technicians and other staff were

28 (19.2%). This demonstrates that the majority of the personnel working in these hospitals was female and nurses/midwives, between 20 and 30 years, and had post-graduate education.

Psychometric Properties of Scale Items: Consistent with prior research (Atilgan, Aksoy & Akinci, 2005; Oppong & Phiri, 2019), the psychometric measures of the scale items were validated via exploratory factor analysis (EFA), Cronbach alpha and confirmatory factor analysis (CFA). The measurement model was performed via CFA by using SPSS Amos 22. The CFA aimed to confirm the findings of the EFA and also to assess the discriminant and convergent validity.

Exploratory Factor Analysis: The EFA was conducted to check the extent to which the scale items load on their purported constructs to yield computer education, PEOU, PU, and BITU to provide support for construct validity (Atilgan et al., 2005). Seventeen (17) test instruments were subjected to the EFA. Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy was used to check whether the sample size is satisfactory for the successful conduct of the EFA. The results of the EFA presented in Table 1 below indicate that the sample size was satisfactory because the value of the KMO was .889, which is above the proposed .60 (Pallant, 2013). Moreover, the EFA was supported by the results of Bartlett`s Test of Sphericity (Hair, Black, Babin & Anderson, 2010). The EFA via the maximum likelihood factoring produced four distinctive factors.

Where factor 1 represents BITU, 2 is PU, 3 is computer education and 4 is PEOU. Overall, 11 scale items loaded well on their respective constructs. The factor loadings ranged between .343 and .933, while loadings less than .30 were dropped (Floyd & Widaman, 1995). Moreover, all the four factors had eigenvalues above one, and also explained 66.536 % of the total variance. To confirm construct validity, the factor loading of each test instrument on its purported variable exceeded the cross-loadings on any other variables (Hair et al., 2010). Cronbach alpha was employed to examine the scale items` reliability. The findings from Table 1 showed that computer education, PEOU, BITU, and PU had coefficients above the recommended cut-off of .70, ranging between .731 and .885, which indicate good reliability (Tavakol & Dennick, 2011).

Table 1: Results of Exploratory Factor Analysis

Test Items		**Factors**			
		1	**2**	**3**	**4**
BEH19	I will use Information technology for patient care and management	.386			
BEH20	If I am given the opportunity, I will use information technology	.506			
PER 5	Information technology allows me to have much more control over the work I do		.933		
PER 6	Information technology enables me to work faster		.751		
PER7	Information technology improves the accuracy of my performance		.834		
PER8	Information technology enhances my effectiveness on the job		.569		
PER9	Information technology enables me to make precise decisions based on available data		.564		
LIT1	I have adequate knowledge of information technology			.584	
LIT2	I feel reluctant to use information technology for fear of making mistakes which cannot be corrected			.510	
EAS16	Interaction of data with information technology makes it easy to understand				.343
EAS17	Overall, I find information technology very easy to use				.443
Cronbach Alpha		.731	.885	.747	.759
Eigenvalues		7.485	1.642	1.153	1.031
Percentage of Variance Explained		44.032	9.658	6.781	6.065
Percentage of Total Variance Explained = 66.536					
KMO = .889; **Bartlett`s Test of Sphericity**: X2 = 1340.856; DF = 136; p = 0.000					

Source: Field Survey

Structural Equation Model (SEM): SEM was used to evaluate the statistical significance of the research hypotheses. As proposed by Byrne (2016), the measurement model was performed before the structural or path model.

Measurement Model: The measurement model was performed via CFA by using SPSS Amos 22. The CFA aimed to confirm the findings of the EFA and also to assess the discriminant and convergent validity. First, to provide support for convergent validity, scale items with standardized regression weights below .50 were dropped (Hair et al., 2010). The findings of the CFA are displayed in Table 2 which revealed that 10 scale items loaded on their purported factors. The standardized regression weights of the 10 scale items were statistically significant, ranging from .676 to .867. These findings confirmed convergent and discriminant validity (Kline, 2005). The Chi-square test (CMIN = 47.976, DF = 29, p = .015) was statistically significant and therefore, did not confirm the sampled data. However, other fit indexes strongly supported the measurement model. The Normed Chi-square test (CMIN/DF) of 1.654 was below three, indicating a better model fit (Hair et al., 2010). Likewise, the Incremental Fit Index (IFI), Comparative Fit Index (CFI), Relative Fit Index (RFI), Tucker-Lewis Index (TLI) and Normed Fit Index (NFI) were .976, .975, .909, .962 and .941, which are all higher than 0.90 respectively. This shows a good model fit (Hu & Bentler, 1999; Hair et al., 2010). Lastly, the Root Mean Square Error of Approximation (RMSEA) was .067 with a 90% confidence level falls between .30 and .10, which is less than .80, indicating a superior model fit (Hu & Bentler, 1999). These findings suggest that the measurement model will provide better support to the path analysis.

4. Findings

Table 2: Findings of the Measurement Model

Constructs and Scale Items	Standardized Regression Weights	t-values
Perceived Usefulness		
PER5	.867	— a
PER6	.826	12.378
PER7	.844	12.801
PER8	.719	10.002
Perceived ease of use		
EAS 16	.767	9.336
EAS 17	.797	— a
Behavioural intentions to use		
BEH 19	.676	— a
BEH 20	.852	8.154
Computer Education		
LIT 1	.785	6.719
LIT3	.763	— a

Notes: a = path parameter was set to 1, therefore not-values were estimated; all regression weights are significant at p = 0.001 level.

Construct Validity Test: Table 3 below depicts the results of construct validity statistics in the measurement model. Average Variance Extracted (AVE) was computed to further establish convergent validity in the CFA. The results indicate good convergent validity since all the AVEs of the factors were above .50, which ranged between .560 and .666 (Fornell & Larcker, 1981). Secondly, the square root of the AVEs of the factors was above the squared inter-factor correlations, which indicates independence between the factors (Bagozzi & Yi, 1988; Fornell & Lacker, 1981). This demonstrates that the construct validity of the CFA is acceptable which will offer a satisfactory analysis of the path model.

Table 3: Results of the Construct Validity Test

Latent Constructs	AVE	Perceived Useful	Perceived Ease of Use	Computer Education	Intention to Use
Perceived Usefulness	.666	.816**			
Perceived Ease of Use	.613	.643	.783 **		
Computer Education	.560	.445	.295	.748**	
Intention to Use	.591	.573	.656	.327	.769**

Notes: AVE = Average Variance Extracted; ****** Square root of AVEs; off-diagonal estimates display the squared inter-construct correlations.

Structural Model: The path model was employed to assess the hypotheses posited in this paper. Here, the computer education is specified as the independent variable, PEOU and PU are the mediating variables, whilst BITU is the dependent variable. Although, the Chi-square test (CMIN = 48.764, DF = 30, $p = .017$) failed to validate the path analysis, the other fit indexes were satisfactory; CMIN/DF = 1.625; RFI =. 911; TLI = .964; IFI = .976; CFI = .976; NFI = 0.940; RMSEA = .066. The findings of the path model in Table 4 revealed that computer education has direct relationship with PEOU ($\beta = .570$, $t = 5.045$, $p = .000$) and PU ($\beta = .312$, $t = 3.028$, $p = .002$) at significance levels of $p < .001$ and .01 respectively. These findings confirm *H1* and *H2.* In turn, PEOU has direct relationship with BITU ($\beta = .891$, $t = 3.996$, $p = .000$) and PU ($\beta = .624$, $t = 5.530$, $p = .000$) at significance level of $p < .001$. These findings also confirm *H3* and *H4*. Finally, although, the relationship between PU ($\beta = .046$, $t = .253$, $p = .800$) and BITU is positive, it is not statistically significant. This outcome shows that *H5* is rejected.

Table 4: Findings of the Structural Model

Hypotheses	Structural Relations	Standardized Estimates(β)	t-value	Results
H1	Perceive Ease of Use <---- Computer Education	.570	5.045	Supported
H2	Perceived Usefulness <----- Computer Education	.312	3.028	Supported
H3	Intention to Use <--------- Perceived Ease of Use	.891	3.996	Supported
H4	Perceived Usefulness <--- Perceived Ease of Use	.624	5.530	Supported
H5	Intention to Use <---------- Perceived Usefulness	.046	.253	Unsupported

Discussion

This paper was set out to assess the role of computer education in the BITU IT systems in the hospitals in Kumasi. The research revealed that computer education contributes to increasing PEOU of IT systems in the hospitals in Kumasi. This result is similar to the findings of a prior study which indicates that computer education positively influences the PEOU of technology application (Burton-Jones & Hubona, 2006). Thus, a high level of computer education potentially enhances the users' understanding and reduces their anxiety about using IT applications. In turn, PEOU directly affects PU and BITU the IT applications in the hospitals in the Metropolis. This result concurs with previous research which suggests that PU and BITU are positively influenced by PEOU of IT systems (Venkatesh & Davis, 2000).

The adoption of an IT system is enhanced once the user understands and is comfortable with its usage. The user then appreciates the importance of the IT application of his job performance. Consequently, the user develops a positive attitude toward it and ultimately, the willingness to work with it. Consistent with past research (Burton-Jones & Hubona, 2006), the study also found that staff computer education directly influences the PU of IT systems in the hospitals in the Metropolis. In essence, the extent of computer training the users have provides a platform for them to understand the importance of using IT applications in health care settings. Finally, the study also revealed that computer education commands a stronger influence on PEOU than the PU of IT systems in the hospitals in Kumasi.

Recommendations: Guided by the findings of the research, the recommendations made are as follows;

- First, the research confirmed that computer education positively influences PEOU and in turn, drives BITU IT systems in the hospitals in Kumasi. It is therefore recommended that management should offer regular computer training to staff to enhance PEOU which in turn, will increase their BITU in the hospitals in the Metropolis.

- The research also established that PU of IT applications is directly influenced by computer education in the hospitals in Kumasi. Therefore, management should concentrate their efforts to improve computer education to enrich staff PU of IT systems in the hospitals in Kumasi.
- Furthermore, the research demonstrates that PEOU positively affects staff PU of IT applications in the hospitals in Kumasi. Consequently, management should make the use of IT systems less effortful and comfortable to staff to enhance their PU in the hospitals in the Metropolis.
- Finally, the research also revealed that computer education commands a greater influence on PEOU than the PU of IT applications in the hospitals in the Metropolis. Recognizing the dominant impact of computer education on PEOU of IT applications, management should focus on computer training to greatly enrich the staff understanding and comfortability in using IT applications in the hospitals within the Metropolis.

5. Conclusion

This paper was set out to evaluate the potential role of computer education in the BITU IT applications in the hospitals in Kumasi Metropolis. More specifically, this paper aimed to investigate the significance of computer education to PEOU and PU and in turn, their impact on BITU IT applications in healthcare organizations. The findings of the research demonstrate that computer education has a stronger impact on PEOU and hence, the BITU IT systems in the hospitals in the Metropolis. This confirms that workers' level of knowledge in IT determines their willingness to adopt IT systems to support health care delivery in the Metropolis. Furthermore, the research revealed that computer education directly influences PU and indirectly, through PEOU of IT systems in the hospitals. Thus, the research establishes that the usage of IT becomes effortless and useful to workers if they are properly trained in IT systems. This paper, therefore, confirmed the conceptualization of Burton-Jones and Hubona (2006), which suggested that computer education is one of the essential antecedents of users` PEOU and PU in the adoption of IT systems in an organization. However, PEOU was identified as the key determinant of BITU IT systems in the hospitals in Kumasi.

Limitations and Future Research: This paper is not free from limitations that necessitate further studies to strengthen its generalization. Geographically, the research was confined to healthcare facilities in Kumasi which may limit its generalization to other parts of the country. Future research should include healthcare facilities drawn from the rest of the country to enrich the generalization of the current research. In addition, quantitative research methods were used where closed-ended questions were utilized to ascertain the PU, PEOU, BITU, and the level of computer education. It is recommended that the qualitative approach should be considered in the future to permit a comprehensive study of the level of staff computer education, PEOU, PU, and BITU IT applications in the healthcare organizations in Kumasi and Ghana as a whole.

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 12, No. 4, August 2020 (ISSN 2220-6140)

Towards a Profitable Pricing Strategy for Rural Women Indigenous Chicken Breeders: A Case of Rural Village in Zimbabwe

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Abstract: Indigenous chickens contribute towards poverty reduction, income generation and economic empowerment of rural women. In this regard, employment of a profitable pricing strategy in selling the indigenous chickens becomes fundamental. This study sought to find out the pricing strategies used by rural women indigenous chicken breeders in one purposively selected village in Zimbabwe. An interpretivist paradigm, a qualitative approach and a case study design were employed to examine the issue under review. Seventeen rural women indigenous chicken breeders were key informants. Data collected using semi structured questionnaires and face to face interviews was analysed to discern themes. Results revealed that rural women indigenous chicken breeders did not apply any pricing strategies when selling their chickens. Prices were approximated based on mainly the weight of the chickens. The study concluded that rural women indigenous chicken breeders were ignorant of pricing strategies and factors to consider when determining, prices for their chickens. Further to that, ignorance of appropriate pricing strategies exposed rural women indigenous chicken breeders to exploitation and loss of revenue. In light of this, the study recommended that workshops be conducted by personnel with an accounting background, to train rural women indigenous chicken breeders on the factors to consider in determining profitable prices for their indigenous chickens. The contribution of this study lies in the development of a framework of factors which rural women indigenous chicken breeders could use as a reference point when determining prices for their indigenous chickens.

Keywords: *Costs, indigenous chickens, pricing strategies, profit, rural women.*

1. Introduction and Background

Indigenous chickens form the largest poultry flock in Africa and they are found in almost every homestead. In Asia, China, Thailand and Taiwan, they are not only kept for home consumption but to enhance food security and improve household incomes (Ouma, 2011). Indigenous chickens which are commonly referred to as village or organic or free-range chickens make an immense contribution to poverty reduction, food security and income generation (TAN, 2013; Alemayehu et al., 2018; Mirembe, 2018). Kingori, Wachira and Tuitoek (2010) concur that indigenous chicken production is a way of increasing rural incomes and economic empowerment of the rural women and youth. Zinyuke (2017) asserts that in Kenya, free-range poultry production has provided "village-based food and income generation opportunities to landless and marginal farmers, especially women," for many years.

According to Maumburudze, Mutambara, Mugabe and Manyumwa (2016), production of organic chickens has always been for consumption purposes. However, there has been an increase in the production of organic chickens for commercialisation purposes. Rukuni, and Eitchel (2006) cited by Maumburudze et al. (2016) define commercialisation as a transition from mostly subsistence agriculture to production for both local and export markets. Commercialisation is increasingly gaining recognition in rural development discourse. Siyaya (2013) concurs that in Swaziland, the indigenous poultry farmers have been encouraged to commercialise in order to improve their livelihoods in terms of food security, poverty alleviation, income generation and as a drive towards self-sufficiency in poultry products. Maumburudze et al. (2016) also agree that indigenous poultry commercialisation in rural households is a potential source of income.

In Zimbabwe, too, according to Zinyuke (2017), there is a growing interest in indigenous foods. In the past five years or so, numerous traditional food eateries have been opened, while hotels have been putting traditional dishes on their menu. Zinyuke (2017), further asserts that while almost every household in the rural areas has always kept free-range chickens for food and a few have sold a bird here and there to raise some money for use in the home, commercial free-range chicken production is a fairly new concept in many areas. With the surge in the drive towards commercialisation, the researchers are of the view that there is bound to be an increase in demand for indigenous chickens from rural women chicken breeders. With the assertion that commercial free-range production is a new concept, one wonders whether rural women indigenous chicken breeders are aware of factors to consider in determining prices for indigenous chickens, hence this study. Considering that rearing of indigenous chickens is a source of livelihood for rural women, it is essential to find out the strategies that they use in determining prices for their indigenous chickens, in order to ensure that they enhance their profitability in the event of increased demand. In review of literature on rearing of indigenous chickens, researchers did not access any studies on pricing strategies used by rural women indigenous chicken breeders, so it became paramount to come up with this study so as to bridge this gap in literature.

Statement of the Problem: There has been an increase in the demand for indigenous chickens as healthy dietary consciousness increases. This is confirmed by Sichizuwe (2019), that the market for indigenous poultry continues to rise due to health related feeding preferences which seem to favour consumption of white meats. The increase in demand for indigenous chickens provides a good opportunity for rural women to participate in poultry production to enhance their profits and economic empowerment. However, prices charged by rural women chicken breeders is more of a 'give away' than an income generating activity. Since these rural women indigenous chicken breeders rely on their chickens as a source of revenue, it is important that they are appraised of the factors to consider when determining the prices for their chickens.

Purpose of the Study: This study sought to establish how rural women poultry breeders determined prices for their indigenous chickens. Findings from such a study would serve as major inputs in the development of a pricing framework to capacitate rural women indigenous chicken breeders on profitable pricing strategies. The suggested pricing framework would assist Zimbabwean women who have a historical background of lower educational levels (Kambarami, 2006; UNICEF cited by CSO, 2002). Furthermore, these results would serve as reference material for other chicken breeders and policy makers.

Research Objective: The primary objective of this study was to find out the pricing strategies used by rural women indigenous chicken breeders in one selected village in Zimbabwe.

Secondary Research Objectives: The following secondary research objectives served to fulfil the primary research objective.

- To find out the background of the establishment of indigenous chicken projects for rural women breeders in one selected village in Zimbabwe.
- To determine the operating expenses borne by rural women indigenous chicken breeders in one selected village in Zimbabwe.
- To find out the challenges faced by rural women indigenous chicken breeders in running their projects in one selected village in Zimbabwe.
- To develop a pricing strategy framework to capacitate rural women indigenous chicken breeders.

2. Literature Review

The primary purpose of keeping village chickens is to earn revenue (Phiri, 2017). According to McAinsh, Kusina, Madsen & Nyoni (2004), poultry production has shown to be a very important income generating activity, predominantly run by women. Income generated from chicken production is spent to better nutrition, health and education of the family. Padhi (2016); Alemayehu et al. (2018) & Mirembe (2018) concur that indigenous breeds of chickens are the mainstay of livelihoods of most rural households in developing and underdeveloped countries. They play a major role for the rural poor and marginalised section of the people with respect to their subsidiary income. Mapiye, Mwale, Mupangwa, Chimonyo, Foti and Mutenje (2008) allude to the view that the development of village chicken production can be a sustainable way of helping to meet the welfare needs of rural populations and raise their standard of living. Alemayehu et al. (2018) support the views that chicken production is a valuable asset to the local population especially for the disadvantaged groups and less favoured areas of rural Africa and elsewhere in the developed world. Chicken production contributes to food security, poverty alleviation and the promotion of gender equality.

According to Kingori et al. (2010), indigenous chickens get most of their feed from scavenging and many occasionally benefit from chicken and other household wastes. Siyaya (2013) concurs that in the past, chickens were exposed to scavenging systems for feed and had minimal supplementary feed. There was no provision for housing, thus they were characterised by low input and low output. Zinyuke (2017) agrees that free range chickens can feed on a normal diet of grass, worms and bugs as they are allowed to freely roam about. However, Kingori et al. (2010), point out that productivity of indigenous chickens that rely on scavenging only is low due to factors which include poor nutrition, diseases and management. Therefore, feed supplementation, provision of housing and disease control in indigenous chickens, can improve the growth rate and egg production. In a study by Maumburudze et al. (2016) on the commercialisation of indigenous chickens in Makoni District, Zimbabwe, farmers argued that supplementary feeding significantly enhanced the growth rate of free-range chickens especially when coupled with the use of modern medicines. However, rural households may not fully comprehend or possess the required business acumen to negotiate with traders and middlemen.

Phiri (2017) asserts that although chicken rearing contributes to the income of rural households, production of indigenous chickens has challenges. These challenges have led to low gains. Challenges include the need for vaccinations, proper housing units, organised markets and provision of supplementary feed. Dube, Francis & Maliwichi (2016) share similar sentiments that besides the aforesaid challenges, lack of regulation of prices of poultry feeds makes it difficult to run profitable poultry business. High prices of poultry feeds force poverty alleviation programmes, 'PAPs,' to have fewer chickens than what is required for optimal performance. Besides, the cost of poultry feeds, these chickens have to be vaccinated against diseases and Dube et al. (2016), assert that drugs and vaccines for poultry are expensive.

Initiatives to improve output have cost implications which have to be considered when determining a price. According to the Cambridge Advanced Learner's Dictionary (2008:315), cost refers to the amount of money needed to buy, do or make something. Price is the amount of money for which something is sold (Cambridge Advanced Learner's Dictionary 2008:1124). Horngren et al (1997) asserted that when coming up with a selling price; direct material, direct expenses, variable overheads, fixed overheads and mark-up should be considered. Costs that are traced to objects are direct costs, and costs that are allocated to a cost object are indirect costs. Based on Horngren et al (1997)'s explanation, even if rural women poultry breeders use their own children in rearing these chickens, this constitutes indirect costs and should be considered. Chase (2008) cited by Siyaya (2013) asserts that products are generally priced based on customers' demand, competition and costs. Most farmers use the cost based strategy which is the strategy that determines profit based on cost (production and transaction costs). Siyaya (2013) posits that profitability is the measure of the returns a business creates after deducting operating costs and other expenses from income divided by inputs.

It is important to explain why the study focused on rural women indigenous chicken breeders. According to McAinsh et al. (2004) & Alemayehu et al. (2018), a large number of women in the households often with the assistance of children are actively involved in the production of chickens which helps them to generate revenue and/ or complement the nutrition requirements of the family. Historically, women in Zimbabwe were marginalised educationally (Kambarami, 2006; UNICEF cited by CSO, 2002). Although the historical marginalisation of women is beyond the scope of this paper, it is important to consider this educational background for contextualisation purposes of the study.

3. Methodology

The study which adopted an interpretive paradigm and a qualitative approach was conducted in one purposively selected village in Zimbabwe. The target population for the study was 17 rural women indigenous chicken breeders thus constituting 17 households. The snowball sampling technique was used to identify the participants where one identified rural woman indigenous breeder referred the researchers to other key informants with similar characteristics (Cooper and Schindler, 2008). The justification for having women as key participants was informed by Alemayehu et al. (2018) that the routine management of poultry was undertaken by women, often with the assistance of children. Data collection instruments included face to face interviews and semi-structured questionnaires. Regarding ethical issues, permission to conduct the study was sought from the relevant authorities and it was granted. Verbal consent had to be sought from 'would be' participants before the commencement of the interviews. The researchers ensured that protection from harm, confidentiality and anonymity of the participants were observed.

4. Results and Discussion

The study sought to find out the pricing strategies used by rural women indigenous chicken breeders in one selected rural village in Zimbabwe. Results and discussions are based on the objectives of the study in which 17 participants were key informants.

Background of the Establishment of Indigenous Chicken Projects by Rural Women: Table 1 shows the background details of the establishment of indigenous chicken projects by rural women in terms of: their duration in the indigenous chicken industry, the number of chickens they bred, the source of the chickens and the costs of start-up chickens.

Table 1: Shows Background Details of the Establishment of the Chicken Projects for Rural Women Indigenous Chicken Breeders

Participant	Question 1	Question 2	Question 3	Question 4
	How long have you been in the industry?	How many chickens do you have?	What was the source of your chickens?	If you bought them, how much did each chick cost you?
1	two years	10 chickens	I bred them	N/A
2	20 years	30 chickens	I bred them	N/A
3	20 years	13 chickens	I bred them	N/A
4	two years	20 chickens	I bought them	15 RTGS each
5	two years	18 chickens	I bred them	N/A
6	50 years	20 chickens	I bred them	N/A
7	50 years	30 chickens and 14 chicks	I bred them	N/A
8	five years	seven chickens	I bred them	N/A
9	two months	10 chickens	I bred them	N/A
10	20 years	five chickens and 12 chicks	I bought them	10 RTGS each
11	three years	25 chickens	I bred them	N/A
12	15 years	25 chickens	I bred them	N/A
13	five years	15 chickens	I bought them	10 RTGS each
14	It's my first time.	10 chickens	I bred them	N/A
15	one year	56 chickens	I bred them	N/A
16	two years	20 chickens	I bred them	N/A
17	15 years	29 chickens	I bred them	N/A

Results in Table 1 show that the majority of the participants have been rearing indigenous chickens for a long time, with some having been in the business for fifty years. Rearing of these chickens is on a smaller scale except one participant, who is only one year old in business with 56 chickens. The implication is that these indigenous chickens are mainly for subsistence. These results tally with views expressed by Zinyuke (2017) that commercial free-range chicken production is a fairly new concept in many areas. Based on these findings, the concept of commercialisation could be non-existent. Pertaining to the source of their chickens, only three participants indicated that they had bought them while the rest had bred their chickens, suggesting low start-up costs.

Expenses Borne by Rural Women Indigenous Chicken Breeders: Questions in this section related to the type of feed the chickens were given, the source and amount of feed in order to determine the costs incurred. Responses are shown in Table 2, 3 and 4 respectively.

Table 2: Shows Expenses Borne by the Rural Women Indigenous Chicken Breeders

Participant	Question 5	Question 6	Question 7	Question 8
	What do you feed these chickens on?	Where do you get your feeds from?	How much is a bag of feed?	How many bags do you buy to fully grow your chickens?
1	sorghum and maize	I buy the feed from Bulawayo.	Prices are never fixed.	sorghum-20kg or (21/2 buckets) maize-50kg (6 buckets)
2	chick mash, rapoko and maize	I buy from my neighbours and sometimes from Bulawayo.	All the prices have fluctuated. 10kg chick mash used to be $50 RTGS.	1x10 kg chick mash 2 buckets rapoko after 3 months
3	rapoko, crushed maize, sunflower	I grow most of my feed.	I only buy maize seed. It used to be 50 RTGS per 10 kg sunflower-15 RTGS per 2kg sorghum 5RTGS per bag.	4-50 kg bags
4	crushed maize	I buy from my neighbours.	10 RTGS a bucket	6-60 kg bags
5	chick mash & rapoko	Bulawayo	50 RTGS	4 -50 kg bags
6	rapoko and crushed maize	I buy rapoko from neighbours and I grow my own maize.	I only buy little rapoko at 10 RTGS a tin.	3-50 kg bags, depending on the feed
7	chick mash and rapoko	Bulawayo	150 RTGS	3-50 kg bags, depending on the number
8	chick mash and rapoko	Bulawayo	70 RTGS for a 50kg bag	3- 50 kg bags
9	rapoko and sadza	Mines	70 RTGS	3-50kg bags
10	rapoko and sadza	Bulawayo	50 RTGS	3-50 kg bags
11	rapoko and maize	Anyone who will be selling	280 RTGS	1- 50-kg bag
12	Rapoko	From neighbours	100 RTGS	1- 50kg bag
13	I feed chicks on rapoko and chickens on maize	I grow my own feeds.	N/A	2 -50kg bags
14	Rapoko	Bulawayo	50 RTGS	2- 50kg bags
15	rapoko and sorghum	Gwanda	50 RTGS	2- 50 kg bags
16	Maize	Locals	60 RTGS	2-50kg bags
17	rapoko and chick mash	Bulawayo	300 RTGS	3-50kg bags

According to Table 2, the indigenous chickens are mainly fed on rapoko, maize, and sorghum thus confirming findings by Zinyuke (2017). These are indigenous crops which rural women indigenous breeders can grow to cut down on costs as rapoko and sorghum are drought resistant crops. However, the introduction of chick mash bought from Gwanda and Bulawayo was likely to increase the costs as expressed in their answers. Participant **1,** "Prices are never fixed." Participant **2,** "Prices fluctuate. This is true of the situation prevailing in the country which has a negative impact on their businesses. These findings corroborate sentiments by Dube et al. (2016) that lack of regulation of prices of poultry feeds makes it difficult to run profitable poultry businesses. This means an increase in the direct costs of producing these chickens should be factored in when determining the prices of chickens. Interestingly, there were two participants who indicated that they grow their own feeds. These participants would be expected to benefit from reduced costs.

The number of bags required to fully grow the chickens is determined by the number of chickens kept. Although the number of bags to fully grow the chickens were few, the costs were increased by the ever escalating stock-feed prices. If these indigenous chickens were left to scavenge as noted by Kingori et al. (2010); Siyaya (2013) & Zinyuke (2017), perhaps costs would be very low but nowadays they have to be fed in order to improve output as postulated by Maumburudze (2016). For some, the number of bags consumed by the chickens did not tally with the number of chickens kept. For some it appeared to be guess work.

Further Expenses Incurred: Participants were asked to indicate further costs they incurred in rearing their indigenous chickens. Questions ranged from whether these rural women indigenous breeders had any helpers; the number of helpers, the activities the helpers performed and the labour costs incurred. Their responses are shown in Table 3.

Table 3: Shows Other Expenses Incurred by the Rural Women Indigenous Chicken Breeders

Participant	Question 9	Question 10	Question 11	Question 12
	Do you have any helpers?	How many helpers do you have?	What activities do your helpers do?	How much do you pay them?
1	Yes	3	1) cleaning the fowl run 2) giving chickens feed 3) giving them water	I don't pay them.
2	Yes	3	1)cleaning the fowl run 2) giving them feeds 3)giving them water 4)locking them up in the evening	I don't pay them. We share the spoils.
3	No	N/A	N/A	N/A
4	Yes	4	1)cleaning the fowl run 2)feeding the chickens	They are my children. I don't pay them.
5	Yes	3	watering and feeding the chickens when I am not around	I provide for their school needs because they are my children.
6	No	N/A	I do it myself.	N/A
7	Yes	No	I do all the activities myself.	N/A
8	Yes	I	cleaning the fowl run and watering them	50 RTGS. Sometimes I buy him groceries.
9	No	N/A	N/A	N/A
10	Yes	2	cleaning the fowl runs and feeding them	I pay fees for their children.
11	Yes	my 3 children	cleaning the fowl run, feeding and watering the chickens	30 RTGS
12	Yes	One	feeding them	30 RTGS
13	No	N/A	N/A	N/A
14	No	I do the work on my own.	N/A	N/A
15	No	I do the work myself.	N/A	N/A
16	Yes	2	feeding the chickens	I don't pay them. They are my children.
17	Yes	1	cleaning the fowl run, feeding and watering them	30 RTGS as and when I get it.

What can be deduced from Table 3 is that participants in this study do not consider family labour to be 'paid labour.' This is evidenced from answers such as: Participant **1,** "I don't pay them." Participant **2, "**They are my children." These answers showed that the participants were ignorant of what constitutes costs of labour and that these costs should be incorporated in determining prices. Those who pay their helpers indicated that the money came from chicken sales.

Table 4: Shows Further Expenses and Proceeds

Participant	Question 13	Question 14	Question 15
	Are there any other expenses you incur for your chickens?	**What are these expenses?**	**Are you making any profit?**
1	Yes	Buying, them vaccines.	If the sales are good, I do.
2	Yes	buying vaccines	Yes
3	Yes	buying vaccines eg terramycin spray	Yes
4	Yes	buying vaccines	Yes
5	Yes	buying vaccines	a bit
6	Yes	Due to drought, I have to buy water and it's 10 RTGS a wheelbarrow.	a bit
7	Yes	buying vaccines and net wire	No
8	Yes	buying vaccines	a bit
9	Yes	Antibiotics	Sometimes
10	Yes	buying vaccines	Sometimes
11	Yes	buying vaccines	A bit
12	Yes	buying antibiotics	Yes
13	Yes	buying vaccines	I used to, not anymore.
14	Yes	buying vaccines	I don't even know whether I am making profit or not.
15	Yes	vaccines	I am not because I don't have money to buy more chickens and re-stock the feeds.
16	Yes	vaccines	a little
17	Yes	fuel for pumping the water	not much

Based on results in Table 4, rural women indigenous chicken breeders incur additional costs such as the purchase of vaccines. These results tally with the findings by Dube et al. (2016), that drugs and vaccines for poultry are expensive. This means that these are additional costs which women have to factor in but one wonders whether these expenses are taken into account when considering their prices. On the issue of whether they were making any profits, only four indicated that they were, with the rest saying that they were realising very little profit if any. Two participants were honest enough to say they no longer made any profits. Making profits is the fundamental reason for being in business. Participant **14,"** I don't even know whether I am making profit or not." Participant **15,** "I am not, because I don't have money to buy more chickens and re-stock the feeds."

Challenges Faced by Rural Indigenous Poultry Breeders: In response to the question related to challenges faced by rural women indigenous poultry breeders, the following were given.

Table 5: Shows Challenges Related to Price Determination

Participant	Question 13	Question 14	Question 15
	When you sell, how much do you charge per hen?	**When you sell, how much do you charge per cock?**	**How do you determine the price for your hen or chicken?**
1	20 RTGS	25 RTGS	I consider weight. If the weight is low, I negotiate with the buyer.
2	20 RTGS	25 RTGS	I only consider the number of chicks it has produced for continuity purposes and I just negotiate with the buyer.
3	20 RTGS	25 RTGS	My labour and the costs of milling the feed.
4	20 RTGS	25 RTGS	weight
5	20 RTGS	25 RTGS	Amount of feed. Cocks eat more than hens.
6	20 RTGS	25 RTGS	I don't weigh them. I follow what the neighbours are charging though sometimes I come up with my own prices.
7	10 RTGS	15 RTGS	weight
8	20 RTGS	25 RTGS	The amount of time I take to rear them.
9	20 RTGS	25RTGS	weight
10	50 RTGS	60 RTGS	weight
11	50 RTGS	60 RTGS	weight
12	55 RTGS	60 RTGS	I consider their weight.
13	30 RTGS	40 RTGS	I consider the weight
14	40 RTGS	50 RTGS	Amount of feed
15	30 RTGS	60 RTGS	weight
16	25 RTGS	30 RTGS	I just sell. I don't consider anything.
17	30 RTGS	40 RTGS	weight

Table 5 clearly shows that the prices charged are not market prices at all. One cannot even afford to buy supplementary feed with these incomes let alone improve their livelihoods. To make matters worse, participants indicated that they do not have scales with which to weigh their chickens in order to determine accurate prices. Determination of prices did not follow any formula as depicted by these verbatim statements. Participant **1,** "I consider weight. If the weight is low, I negotiate with the buyer." Participant **6,** "I don't weigh them. I just follow what the neighbours are charging." Participant **8, "**I consider the time that I have taken to rear them." Participant **17,** "I consider weight." Most of the participants said that they came up with prices of their chickens based on weight, or negotiation. However, there were others who said that they consider the time taken to rear the chickens or them just sell without any consideration.

Participants went further to say cocks were more expensive because they ate more than hens. Surprisingly, to gauge the weight of their chickens, they put them on the palms of their hands and shook them up and down. By so doing they said that they were able to feel the weight and tell which one weighed more and should be priced higher. This weight that is 'felt' does not consider input costs. It is just an approximation. Out of the 17 participants, there were three participants who said that they considered labour and amount of feed in determining prices as revealed in the statements that follow. Participant **3,** "My labour and feeds." Participant **5,** "Amount of feed. Cocks eat more than hens." Participant **14,** "Amount of feed." To have only three knowledgeable people out of a total of 17 participants was really worrisome and called for speedy remediation. Regarding the challenges that they faced due to lack of knowledge on pricing, participants gave the answers reflected in Table 6.

Table 6: Shows the Challenges Faced by Rural Women Indigenous Poultry Breeders as a Result of Lack of Knowledge on Pricing

Participant	Question 16
	What are the challenges that you face when it comes to pricing your chickens?
1	If I don't charge properly, I end up failing to buy feed and vaccines. As a result, I do not make profit.
2	N/A
3	Start-up costs, vaccines, labour and milling costs, make it difficult for me to determine a price. Most of the time people want to negotiate downwards.
4	I fail to get buyers and end up eating the chickens myself.
5	I don't know how to come up with a price. I sometimes overcharge and at other times under charge. I don't have a scale which is why I sometimes get cheated. When I fail to get buyers, I end up eating my chickens.
6	I don't know how to come up with a price.
7	I don't know how to come up with a price. I end up being cheated by customers with more knowledge.
8	I just guess the price.
9	I don't know how to price my chickens. As a result I get cheated by customers from town.
10	I find that all my chickens are sold out but I have nothing to show for it.
11	I don't know what to consider when coming up with a price.
12	I don't have a scale to weigh my chickens. I put the chicken on my hand and approximate the weight.
13	Due to ignorance I charge low prices for my chickens.
14	Determining the selling price
15	Not knowing where to start.
16	I don't know whether to call it a business because nothing comes out of it.
17	I will not be knowing whether I am making profit or not.

In Table 6, the majority of participants indicated that the major challenges that they faced bordered around lack of knowledge in determining prices. This is reflected in these statements. Participant **1,** "If I don't charge properly, I end up failing to buy feed and vaccines. As a result, I do not make profit." Participant **5,** "I don't know how to come up with a price. I sometimes overcharge and at other times under charge. I don't have a scale which is why I sometimes get cheated." Participant **7,** "I don't know how to come up with a price. I end up being cheated by customers with more knowledge." What was clearly reflected by these findings was that rural women indigenous chicken breeders did not apply any pricing strategy because a profitable strategy would incorporate costs. A profitable pricing strategy would even factor in labour costs by their children as costs. This is why when deciding on the prices to charge, most of them indicated that they used weight because that is all that they knew. These findings are in tandem with observations by Zinyuke (2017) that the concept of commercialisation was fairly new. If there were to be buyers, knowledgeable about pricing strategies, these rural women indigenous chicken breeders would certainly lose out hence the need for a training programme to equip these women with requisite pricing strategies. The possible underlying contributory factor that can be deduced from these results is the lack of education by these rural indigenous chicken breeders (Kambarami, 2006).

Table 7: A Framework towards a Profitable Pricing Strategy for Rural Women Indigenous Chicken Breeders

Input Costs	Intervention Processes	Outcomes
Direct costs/expenses	communication/ teaching	increased profits
cost of chicks (if applicable)		knowledge of pricing
stock feed		reduced costs
vaccines		correct apportionment of costs
Direct expenses	teamwork/communication	good choice of labour
labour costs:		appropriate comparison of costs
own labour		

casual labour (children and helpers)		
Variable overheads	communication/teaching	appropriate budgeting and analysis of overheads
Fixed costs heat lamps feeders waterers fencing rented premises	communication	fair allotment
Mark up- based on the market prices	effective calculations	increased profits
Level of competition-consider prices by competitors	teamwork	market domination and increased profits
Demand- If there is an increase in the numbers of chickens demanded, the price should be increased. If there are too many chickens in the market, slightly reduce the price.	communication	market visibility

As shown in Table 7, all these factors have to be incorporated when coming up with profitable prices for their indigenous chickens.

5. Conclusion and Recommendations

The study sought to find out the pricing strategies used by rural women indigenous chicken breeders in one selected village when determining prices for their chickens. Findings revealed that the participants lacked knowledge of factors to include when coming up with the prices. The study also showed that the selected rural women indigenous chicken breeders did not employ any pricing strategies when selling their chickens. They professed ignorance of the variables to be factored in when determining prices which include direct costs, direct expenses, variable and fixed overheads, mark up, the level of competition and demand. The study concluded that ignorance of the aforesaid input costs impacted negatively on their revenue and led to exploitation of these rural women indigenous chicken breeders by those knowledgeable on profitable pricing strategies. Based on the findings, the study made the following recommendations. To capacitate rural women indigenous chicken breeders on relevant pricing strategies, there is need for training on financial management skills. These workshops should be conducted by people with accounting skills who will carefully impart the requisite knowledge and skills of how to make calculations based on market prices. This would assist the rural women indigenous chicken breeders to identify their own direct and indirect costs and incorporate these costs in coming up with profitable prices.

Contribution of the Study to the Body of Knowledge: Results in this study glaringly show that coming up with a profitable pricing strategy for rural women indigenous chicken breeders is a big challenge, hence the need to develop a framework which rural women indigenous chicken breeders can use as a reference point when determining prices for their chickens. Based on literature search, this happens to be the first study that focused on developing a framework towards a profitable pricing strategy specifically for the selected rural village in Zimbabwe where this study was premised. Therefore, this study fills a gap in existing literature on the determination of an appropriate pricing strategy to benefit the rural women indigenous chicken breeders. The suggested framework shows the variables which rural women indigenous chicken breeders should include when determining a price.

Areas for Further Research: The current study sought to find out the pricing strategies employed by rural women indigenous chicken breeders in one selected village in Zimbabwe. A further study could be conducted in an urban set up, with women who are now into rearing of indigenous chickens for comparative purposes, to find out what the situation is regarding the same phenomenon.

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Determinants Influencing the Level of Corruption in Indonesia Local Governments

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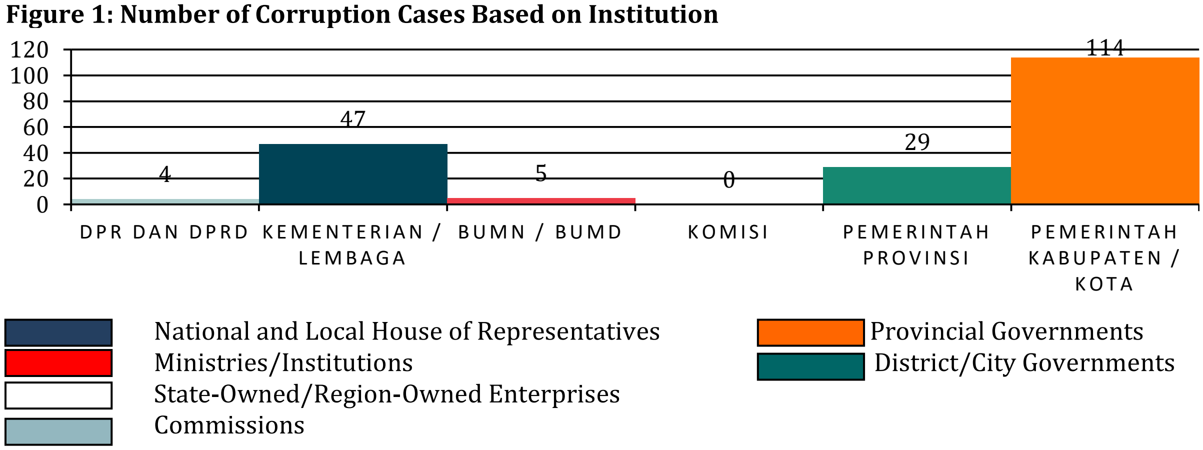
Abstract: This study is based on the high levels of corruption occurring in Indonesia, indicated by the low level of the Corruption Perception Index (CPI). The majority of corruption cases occurring in Indonesia involves local governmental institutions. The high levels of corruption in local governments is related to government size, fiscal decentralization, and audit findings. The aim of this study is to determine the factors that cause the high levels of corruption in local governments. This study uses the agency theory as theoretical basis to formulate a framework of thought that connects government size, fiscal decentralization, audit findings, and corruption levels. The result of this study shows that the variables of government size, fiscal decentralization, audit findings, all have significant effects towards corruption levels. Fiscal decentralization and audit findings have a negative effect towards corruption level, while the government size variable has a positive effect on corruption levels. This study provides contribution to the practices of auditing, government execution, law enforcement, and corruption control initiatives in local governments in Indonesia.

Keywords: *Government Size, Fiscal Decentralization, Audit Findings, Corruption Levels.*

1. Introduction

Corruption is one of the issues in developing countries (Olken, 2007). The practice of corruption in government bodies causes the decrease of governmental performance in managing resources, decrease of national revenue from the tax sector, the distortion of public expenditure, and the decrease of public infrastructure quality. The final effect of the chain caused by the practice of corruption is revenue discrepancy, and poverty (Mauro, 1995). The Corruption Perception Index (CPI), released by the Transparency International (TI) organization is one of the instruments to measure the success of a country in handling and eradicating cases of corruption. The lower the rate of corruption cases in a country, the higher the CPI score obtained, and vice versa. Countries with a stable economic condition tend to have a higher CPI score compared to developing countries. This is due to the fact that the Gross Domestic Product (GDP) is an influencing factor in predicting corruption in a country (Bernaldez, 2014). Indonesia ranks 85 out of 180 countries, with a CPI score of 40 points (Transparancy International, 2019). This score represents a relatively high level of corruption cases in Indonesia. However, there have been improvements with regards to regulation, decentralization, and law enforcement supremacy that have been implemented since the institutional reformation at the end of the 1990s, which caused economic and political crisis in Indonesia. This event drove Indonesia to become more democratic, decentralized, and regulated (Henderson & Kuncoro, 2011).

Figure 1: Number of Corruption Cases Based on Institution



During 2018, a total of 199 cases of corruption spread across governmental institutions occurred. The Commission for Corruption Eradication categorizes this corruption case data based on governmental institutions, as shown in Figure 1. The data shows that the governmental institution with the highest prevalence of corruption cases are district/city local governments. Anan (2019) stated that decentralization is one of the causes of the high levels of corruption in local governments of Indonesia. Previous studies have also shown that fiscal decentralization has a significant effect towards corruption levels (Anan, 2019; Dong & Torgler, 2013; Fisman & Gatti, 2002). On the other hand, decentralization is one of the instruments to combat practices of corruption. Fiscal decentralization creates a more accountable and responsive government practice towards the condition of the region's people (Changwony & Paterson, 2019; Faguet, 2014; Shah, 2006). This statement is supported by the research findings of Aswar dan Surbakti (2013), which states that the implementation of fiscal decentralization in Indonesia helps in decreasing discrepancies between regions, since its mechanism aids local governments in managing resources according to the needs of the people in the region. Another study also found that fiscal decentralization can also increase the quality of the government in regards to corruption management, law supremacy, and government effectivity (Kyriacou & Roca-Sagalés, 2011; Mello & Barenstein, 2001). Suhardjanto, Syafruddin, Andini and Rahmatika (2018) state that the implementation of decentralization.

In Indonesia provides opportunity for the practice of corruption through the misuse of authority by people with power, in both small and large governments. A previous study showed that government size significantly affects corruption levels (Blackburn, Bose, & Emranul Haque, 2006; Goel & Nelson, 1998; Magtulis & Poquiz, 2017). The size of the government can be viewed from the size of intervention done by the country through the budget (Magtulis & Poquiz, 2017). However, the size of budget intervention can affect the high rates of corruption if not accompanied with strict monitoring. This is due to the fact that government officials often times benefit from the loophole of budget intervention through public expenditure, in order to practice corruption (Ko & Zhi, 2013; Zhao & Xu, 2015). Another previous study also shows that government size affects the level of corruption in a region (Goel & Nelson, 1998; Liu & Lin, 2012). The lack of monitoring and governance becomes the cause of the prevalence of corruption in the public sector (Olken, 2007). To prevent cases of corruption in local governments, there needs to be monitoring done by the central government towards local governments (Suhardjanto et al., 2018). The National Audit Board (BPK) is the institution that is responsible to conduct examinations to ensure that a governmental institution manages resources with proper accountability, based on the Constitution of the Republic of Indonesia, Law Number 15 Year 2006 on the National Audit Board. Examinations conducted by governmental audit institutions become the indicator of the transparency and accountability level of governmental institutions (Suhardjanto et al., 2018).

Auditing institutions guarantee the quality and availability of information provided by the government (Brusca, Manes Rossi, & Aversano, 2018; Hameed, 2005). Furthermore, the examination mechanism implemented by the audit institution based on information accuracy and the prevention of financial misuse, enables the audit institution to detect fraud in the government (Brusca et al., 2018; Liu & Lin, 2012; Olken, 2007). A proper audit process can decrease the level of corruption in the public sector (Gustavson & Sundström, 2018). Ferraz and Finan (2011) state that, when audit institutions work independently and objectively, then deviations or violation cases reported to the audit institution can indicate the presence of corruption practices in the government. Frauds detected during the audit process are reported in the form of audit findings (Liu & Lin, 2012; Suhardjanto et al., 2018). More audit findings show a low level of accountability, and potentially causes corruption (BPK, 2019). A previous study also found that audit findings has a significant effect towards corruption levels (Liu & Lin, 2012; Suhardjanto et al., 2018). This study provides literary contribution by adding the variable of audit findings as an indicator of the weakness of internal control systems, and obedience towards regulations, according to the recommendation of the study conducted by Adedeji, Soyinka and Sunday (2018). The study recommended the use of obedience towards shared regulations, and internal control, to control corruption. Besides theoretical benefits, this study also provides several wide implications for the practice of auditing, government practices, law enforcement, and the initiative of corruption eradication in the local governments of Indonesia.

2. Literature Review and Hypothesis Development

Agency Theory: The agency theory discusses the agency relationship and agency costs that occur in the relationship between the principal and the agent (Eisenhardt, 1989). The agency theory assumes that a person who prioritizes their own interest shows the conflict of interest between the principal and the agent (Jensen & Meckling, 1976). Corruption can be defined as a behavior that does not follow the principal, done by the agent, by private sectors or public officials (Tanzi, 1994). In the public sector, cases of corruption occur due to the misuse of resources by parties from the government, for personal use. This can occur due to the difference in interest and motivation between two parties, as well as asymmetry of information (Eisenhardt, 1989). Blackburn et al. (2006) states that the delegation of authority in government transactions causes an agency problem that can cause corruption practices. The formation of audit institutions in the government is aimed to implement monitoring towards the performance of the agent, and works to mitigate agency problems that occur in the public sector (Hay & Cordery, 2018; Aswar, 2019). A previous study also used the agency theory as the theoretical basis to form a conceptual framework, in a research related to sector public audit and corruption levels (Avis, Ferraz, & Finan, 2018; Brusca et al., 2018; Ferraz & Finan, 2011; Hay & Cordery, 2018). Aside from this, the agency theory was also the framework basis of the relationship between government practices and levels of corruption (Blackburn et al., 2006; Magtulis & Poquiz, 2017; Zhang, 2016). In previous literature, many studies have discussed the role of government size in affecting corruption levels.

Focusing on government size, Magtulis and Poquiz (2017) studied the relationship between government size and corruption levels in the Philippines using the auto regression vector. The result of this study did not find a causal relationship between the two research variables, since the perception of corruption can affect the other three control variables. The result of the study showed that a larger government size will increase the perception of the public on corruption. In another study, Ko and Zhi (2013) analyzes the relationship between fiscal decentralization and corruption levels in local governments in China with moderation from law enforcement. The analysis used data from 31 provinces in China from 1998 until 2008, and the investigation result supports the importance of strong law enforcement for fiscal decentralization in order to decrease the rate of corruption in local governments. Particularly, this study found that law enforcement can moderate the relationship between fiscal decentralization and levels of corruption. Suhardjanto et al. (2018) studies the relationship between audit opinion, audit findings, and audit result follow-up, with the corruption levels in local governments of Indonesia. The data analysis process used data from 34 provincial governments from 2011 until 2015. The result of the study showed that corruption occurs due to a weak monitoring system caused by the misuse of authority by government officials. The result of the study also found that lack of monitoring can cause disobedience towards laws, and thus cause corruption practices.

Hypothesis and Conceptual Framework: The hypothesis development in this study is based on factors suspected to have effects towards levels of corruption, and is thus formulated as follows:

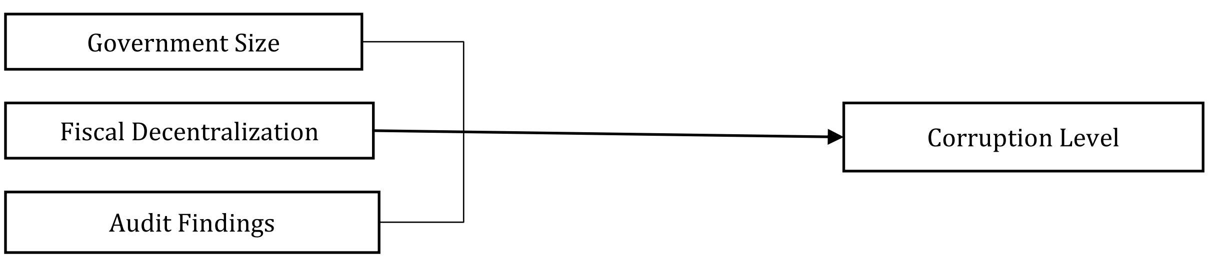
The Effect of Government Size towards Corruption Level: In the context of the agency theory, the government size variable is described as the relationship between the central government and local government. The central government provides incentives to the local governments in the form of a budget that must be managed by the local government. This paradigm is formed due to the fact that the measurement of government size is done by measuring the size of intervention done by the country towards the budget of the government's budget (Magtulis & Poquiz, 2017). This measurement causes larger-sized governments to increase the provision of public goods, and re-distribute revenue to push development (Goel & Nelson, 1998; Zhao & Xu, 2015). Blackburn et al. (2006) stated that the delegation of authority in government transactions causes an agency problem, which can result in corruption practices. A previous study also showed that the size of responsibility given by the central government affects the level of corruption in local governments (Goel & Nelson, 1998; Lecuna, 2012; Liu & Lin, 2012). This is due to the fact that government officials benefit from loopholes in the public expenditure policy to practice corruption (Ko & Zhi, 2013). Based on theory and previous studies, the researcher formulates the following hypothesis:
H1: Government size affect corruption level.

The Effect of Fiscal Decentralization towards Corruption Level: Blackburn et al. (2006) stated that the delegation of authority by the central government to local governments causes an agency problem, which can

result in corruption practice. This statement is supported by a previous study which states that decentralization is one of the factors behind the prevalence of corruption in local governments (Anan, 2019; Ko & Zhi, 2013). However, Shah (2006) states that decentralization can strengthen public accountability by involving the people to monitor the performance of local governments and demand corrective actions, including demanding authorized parties to mitigate corruption and its causes. This accountability aids the government in its war against corruption practices (Brusca et al., 2018). This statement is also supported by the study conducted by Kyriacou and Roca-Sagalés (2011), which found that the concept of fiscal decentralization enables local governments to become more effective in controlling corruption and law enforcement. Another previous study also supports that fiscal decentralization can decrease the amount of corruption in a region (Dong & Torgler, 2013; Fisman & Gatti, 2002; Mello & Barenstein, 2001; Shah, 2006). Based on theory and previous studies, the researcher formulates the following hypothesis:
H2: Fiscal decentralization affect corruption level.

The Effect of Audit Findings towards Corruption Level: The delegation of authority and responsibility by the central government to local governments can cause an agency problem, which can result in corruption practices (Blackburn et al., 2006). Corruption can be defined as an act of disobedience towards the principal, done by the agent (Tanzi, 1994). In the public sector, corruption practices often occur due to the issue of asymmetry of information and incentives that are explained in the agency theory (Elbahnasawy, 2014). The central government attempts to mitigate this asymmetry of information with the formation of an audit institution, tasked to monitor the financial performance of agents (Hay & Cordery, 2018). All forms of deviations done by the local government during the operational process that is found by the audit institution is reported in the audit findings result (Liu & Lin, 2012; Suhardjanto et al., 2018). Deviation findings are categorized into two types, which are: findings of weaknesses in the internal control system, and on disobediences towards laws. All forms of weaknesses of internal control systems and disobedience towards regulations will effect deviating actions which can result in corruption practices (Huefner, 2011). A previous study also found the positive correlation between audit findings and level of corruption (Liu & Lin, 2012; Suhardjanto et al., 2018). This positive correlation indicates that a large number of audit findings found by the government audit institution has an effect in the prevalence of corruption. Based on theory and previous studies, the researcher formulates the following hypothesis:
H3: Audit findings affect corruption level.

Figure 2: Research Framework



3. Research Methodology

The population of this study is the district/city governments in Indonesia, which consists of 416 district governments and 98 city governments. The district/city governments were selected based on the phenomenon of this study, which shows that corruption cases in Indonesia are most prevalent in district/city governments. Furthermore, district and city governments are the lowest level of government in the fiscal decentralization system in Indonesia. The researcher gathers samples based on criteria that the researcher set, from the total population of this study, using the purposive sampling technique. The criteria used in this sampling process is as follows:
a) District/city governments that have corruption cases with legal power, based on the verdict of the national court in 2018.
b) District/city governments that have data of audit result findings reports issued by the National Board of Audit of the Republic of Indonesia (BPK RI).

c) District/city governments that have complete data for all the variables of this study for the 2018 fiscal year. Furthermore, the collection of data for this study was done through publications in the official website and electronic communication media of the related institution. The data gathered consists of Local Government Financial Reports (LKPD), Examination Result Report (LHP) of the BPK, Corruption Case Reports, Population Data, and RGDP Data. This study uses the causal research method. The causal method is used to identify the effects of government size, fiscal decentralization, and audit findings towards the corruption level in local governments of Indonesia. Each variable in this study has its own measurement, which are adopted from previous studies. The methods of variable measurement are shown in Table 1.

Table 1: Variable Measurement

Variable	Measurement	Source
Corruption	Corruption level is measured using a comparison ratio between the number of corruption cases with legal power, and the amount of population per 10.000.	Liu and Lin (2012)
Government Size	Comparison ratio of total local government expenditure to the total of Regional Gross Domestic Product (RGDP)	Magtulis and Poquiz (2017)
Fiscal Decentralization	Fiscal Decentralization is measured with the ratio of total local government expenditure to the total of central government expenditure.	Changwony and Paterson (2019)
Audit Findings	The amount of audit findings on weaknesses in the internal control system, and audit findings on disobediences towards laws.	Liu and Lin (2012)

4. Results and Discussion

The population of this study is 514 district and city governments in Indonesia. The selection of samples used the purposive sampling technique. The end samples of this study are shown in Table 2.

Table 2: End Samples of Research

Criteria	Total
Population	514
District/city governments that do not have cases of corruption with legal power based on the verdict of the national court in 2018	(368)
District/city governments that do not have data on the number of audit findings issued by the BPK RI	(3)
District/city governments that do not have complete data for all the variables of research for the 2018 fiscal year	(0)
Number of samples before outliers	143
Samples with outliers	(35)
End samples	108

Upon conducting filtering towards the population data of the study as shown in Table 2, the researcher conducted an outlier process to obtain consistent research data. Outlier was done using case-wise diagnostics using SPSS software, which considers the standard deviation as its reference. Standard deviation is the measure of data deviation level from the research data center (Sekaran & Bougie, 2016, hlm. 284). Data deviation can be viewed by comparing the standard deviation score to the average score. If the standard deviation variable exceeds the score of the average variable, then the data has a low deviation rate, and vice versa (Cooper & Schindler, 2013, hlm. 401). Aside from that, outlier is also conducted manually to dispose of extreme data in the research data. The number of samples with outlier are 29 district governments and 6 city governments. The end samples obtained after conducting outlier is 90 district governments and 18 city governments. Furthermore, the researched conducted a series of analysis, which consists of: descriptive statistics, and hypothesis testing, using the multiple linear regression method. The process of data analysis was done using the Statistical Package for Social Sciences (SPSS) application. The descriptive statistics of the research data is shown in Table 3.

Table 3: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Corruption Level	108	0,00171	0,21726	0,042325	0,035212
Government Size	108	0,01501	0,53073	0,118876	0,092151
Fiscal Decentralization	108	0,00024	0,00294	0,00064	0,000449
Audit Findings	108	5	24	12,74	3,705
Valid N (listwise)	108				

Based on Table 3, there are 108 end samples. Corruption level has a maximum score of 0.21726, minimum score is 0.00171. The standard deviation of corruption level is less than the average score of corruption level, which indicates a low level of deviation in the research data. The maximum score of government size is 0.53073. Meanwhile, the minimum score of government size is 0.01501. The standard deviation of government size is less than the average score of government size, which indicates a low level of deviation in the research data. Fiscal decentralization has a maximum score of 0.00294. Meanwhile, the minimum score of fiscal decentralization is 0.00024. The standard deviation of fiscal decentralization is less than the average score of fiscal decentralization, which indicates a low level of deviation in the research data. Furthermore, the maximum score of audit findings is 24. Meanwhile, the minimum score of audit findings is 5 audit findings. The standard deviation of audit findings is less than the average score of audit findings, which indicates a low level of deviation in the research data. The classical assumption test, consisting of the normality test, heteroscedasticity test, and multicollinearity test, shows that all classical assumption tests have been fulfilled and the double linear regression test can be performed. The hypothesis testing used the multiple linear regression test.

Table 4: Result of Multiple Linear Regression

Model	Coefficient	T	Sig.
(Constant)	0,031	3,679	0,000
Government Size (GS)	0,288	13,052	0,000
Fiscal Decentralization (FD)	-15,058	-3,314	0,001
Audit Findings (AF)	-0,001	-1,988	0,049
R-Square	0.713		

The test results in Table 4 show that the value of R-Square obtained is 0.713. This score is the representation of the collective effects of Government Size, Fiscal Decentralization, and Audit Findings towards the variable of Corruption Level, which is 71.3% out of 100%. Meanwhile, the remainder of 28.7% is affected by other variables outside of this study. The regression coefficient value of government size is 0.288 and positive. This proves that government size has a positive effect towards corruption level, of 0.288. Government size also has a calculated t value of 13.052, or larger than the t table value of 1.983, with a significance rate of less than 0.05. Therefore, it can be concluded that the first hypothesis of this study is accepted. The result of this study states the existence of a positive and significant effect in the relationship between government size, and corruption level. The size of the government can be viewed from the size of budget intervention done by the central government towards the local government (Magtulis & Poquiz, 2017). This enables larger-sized governments to provide more public needs and revenue distribution well. However, this intervention is often misused by government officials through budget discretion, to conduct corruption practices (Zhao & Xu, 2015). The lack of monitoring towards the budget intervention of the central government becomes one of the issues.

Which can result into deviations done by government officials, even though the central government at present has formed monitoring institutions and law enforcement institutions in order to prevent cases of corruption? The result of this study is in line with a previous study which stated that government size determines the level of corruption (Goel & Nelson, 1998; Lecuna, 2012; Liu & Lin, 2012). However, a different result is shown in the study conducted by Magtulis and Poquiz (2017), which showed that a large government size does not always correspond with high levels of corruption in the Philippines. The regression coefficient value of fiscal decentralization is 15.058 and negative. This proves that fiscal decentralization has a negative effect towards corruption level, of -15.058. Fiscal decentralization also has a calculated t value of -3,314, or larger than the t table value of 1.983, with a significance rate of less than 0.05. Therefore, it can be concluded that the second hypothesis of this study is accepted. The result of this study found that there is a negative effect in relationship between fiscal decentralization and corruption level. The result of this study opposes the statement of Blackburn et al. (2006), which stated that delegation of authority in government transactions from the central government to local governments causes an agency problem that can cause corruption practices.

On the other hand Di Shah (2006) states that decentralization can strengthen public accountability by involving the people to monitor the performance of local governments and demand corrective actions, including demanding authorized parties to mitigate corruption and its causes. This accountability aids the government in its war against corruption practices. This statement is also supported by the study conducted by Kyriacou and Roca-Sagalés (2011), decentralization can also increase the effectivity of the government in regards to corruption management, and law enforcement. fiscal decentralization can decrease the amount of corruption in a region (Dong & Torgler, 2013; Fisman & Gatti, 2002; Mello & Barenstein, 2001; Shah, 2006). However, this result is not in line with the findings of Anan (2019), which found that decentralization is one of the factors behind the prevalence of corruption in local governments. The regression coefficient value of audit findings is 0.001 and negative. This proves that audit findings have a negative effect towards corruption level, of -0.001. Audit findings also has a calculated t value of -1.988, or larger than the t table value of 1.983, with a significance rate of less than 0.05. Therefore, it can be concluded that the third hypothesis of this study is accepted. The result of this study found that there is a negative effect between audit findings and corruption level. The result of this study opposes a previous study that found a positive effect.

Between audit findings and corruption level (Liu & Lin, 2012; Suhardjanto et al., 2018). Aside from that, the findings of this study is also not in line with the concept of agency theory, which states that audit findings are a form of disobedience and deviation done by the agency towards the principal, which can cause losses or misuse of resources by the local government (Huefner, 2011). This result difference with previous research and inconsistency with the agency theory is due to the fact that the corruption data used by the researcher is corruption data that already had legal power in 2018. Meanwhile, not all cases of corruption with legal power in 2018 occurred in that same year. This can be cause by cases having only been exposed in 2018, or the lengthy legal process taken during the course of the case. Meanwhile, audit findings used were actual findings in 2018. However, this difference can be explained by the result findings of a study conducted by Avis et al. (2018), which found that local governments that have been audited by audit institutions can decrease the level of corruption in the future by as much as 8%. The number of audit findings does not always correspond with the high level of corruption in the same period. However, audit findings can become a signal of a weak internal control system, and disobedience towards local government laws. If not responded seriously, this can become a loophole for corruption practitioners. Therefore, audit findings can also become a preventive step to prevent the involvement of corruption practitioners earlier on, and prevent cases of corruption from occurring in the future.

5. Conclusion and Recommendations

Corruption is still a significant issue in Indonesia. This is reflected by the CPI score obtained by Indonesia in 2018, which is 40 points, despite the fact that the government has published steps to decrease corruption in Indonesia, after the political and economic crisis in 1998. This study aims to identify the relationship between government size, fiscal decentralization, audit findings, law enforcement, and corruption level in local governments in Indonesia. The result of this study found that government size, fiscal decentralization, and audit findings, have a significant effect towards the corruption level in Indonesia. This study provides several wide implications for the practices of audit, government execution, law enforcement, and the initiative of corruption control in the local governments in Indonesia. Keeping in mind that corruption is still an issue in Indonesia; the researcher recommends all local governments in Indonesia to practice government transparently and accountably. The implementation of these principles is aimed to be able to decrease the corruption level in regions. Local governments are also expected to be able to involve the role of the people to aid in monitoring the course of a government that is free from corruption practices. Monitoring must also be done by law enforcers, especially those tasked to handle corruption cases.

Law enforcers are expected to be able to monitor and act firmly on corruption practitioners. Therefore, the researcher recommends to increase the availability of national court for criminal corruption (PN TIPIKOR) in Indonesia. This recommendation is made based on the Constitution of the Republic of Indonesia, Law Number 46 Year 2009 on the Corruption Court, which states that the PN TIPIKOR exists in every district/city. At present, there are only a total of 33 PN TIPIKOR, which is less than the total number of districts/cities in Indonesia, which is 514. There are several limitations experienced by the researcher during the process of research. This study is limited to the scope of corruption cases that occur after the reformation. The lack of available data caused the researcher to experience difficulty in obtaining data related to cases of corruption before the reformation. Aside from that, the scope of this study is only limited to findings from government external audit. The next researcher is expected to add the element of government internal audit, and law enforcement. Based on findings from the study conducted by Ko and Zhi (2013), the law enforcement variable moderates the effect of fiscal decentralization towards corruption level in China.

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 12, No. 4, August 2020 (ISSN 2220-6140)

COVID-19 Outbreak and Behavioral Maladjustments: A Shift from a Highly Globalized World to a Strange World of Unique Isolationism

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Abstract: The outbreak popularly called COVID-19 which sneaked into the world system generally believed to have originated from China in the city of Wuhan towards the last quarter of the year 2019 in a manner yet to be unfold by the world powers has been judged to be a great threat to human activities and coexistence. The World Health Organization declared COVID-19 as a global pandemic between February and March, year 2020 and since then it has been a strange world. This paper examined the socio-economic changes and behavioral maladjustments resulting from this deadly disease. The demand and supply shocks as well as the use of fiscal stimulus from different countries and how some key variables respond are well analyzed and structured. The paper underlying some of the damages done to the socio-economic lives of people across the globe and highlight some recovery strategies and future prospects. It recommends spirituality as a winning strategy against carnality. The conclusion was drawn by emphasizing the supremacy of God in the fact that a microbe of invisible property could hastily change our world of global village to a strange world of isolated cities.

Keywords: *COVID-19, global pandemic, fiscal stimulus, microbes, supremacy of God.*

1. Introduction

The world received with great shock the news of an outbreak of a viral disease, called corona virus popularly known as COVID-19 which was declared a global pandemic by world health organization (WHO) in the second Week of March, year 2020. The acronym, COVID-19 was a derivative of the corona virus disease originated from the city of Wuhan in the People Republic of China toward the last quarter of the year 2019. From the acronym therefore, CO = corona, VI = virus, D = disease and 19 = year 2019. It was like a child play, a microbe of invisible property could bring such a great misfortune to humanity despite all the advancement in technology and medicine across the known world. Where are the various detectives and remote sensors to prevent this deadly organism from wrecking its havoc on humanity? The world woke up one day to see a destructive virus causing a pandemonium and behavioral changes in our ways of life. The economic and social lives were brought to a standstill. The saddest thing is that no country irrespective of the level of development and technological sophistication was able to get immediate response to contain this deadly virus other than lockdown, social and physical distancing.

Then the concepts of economic lockdown, social and physical distancing were recommended as the only means of containing the spread of this evil virus. These no doubt have caused severe hardship and terrible pain for the entire mankind living on the planet earth whether developed or underdeveloped countries. The destructive consequences of COVID-19 and its spillover effects on the overall economies and human existence have been noted by authors such as, El-Erian (2020), Ozili and Arun (2020), Ozili (2019), Larry (2020), among others. Economic crises whether resulting from pandemic or otherwise can trigger civil unrest and psycho-social disorders and discontent in any society. See, Bermeo and Bartels (2014); Bagliano and Morana (2012); Giannakis and Bruggeman (2017); Giugni and Grasso (2016). The question of whether the outbreak of pandemic could cause a great economic downturn either at regional or global space has been addressed by authors such as; Horowit (2020) as well as Krueger, Uhlig and Xie (2020). Leading economic experts have also shared the same view, see, Financial Times (2020). The literature also suggests that during the period of upheavals, there is every tendency for government expenditure to rise above her revenue leading to a fiscal imbalance between expenditure and revenue. The regime of fiscal deficit becomes inevitable with the outbreak of pandemic of global magnitude. Many studies on government expenditure and revenue nexus have provided more information on government expenditure and revenue nexus, particularly, Dada (2013) as well as Dalena and Magazzino (2010). The recent outbreak of corona virus has certainly created the need for the government to spend more and earn low due to weakening power of tax payers to earn and pay taxes as a result of measures taken to contain the spread of the corona virus. This paper examined the social economic and behavioral changes associated with COVID-19, the various efforts to cushion the effects on the people and different scenarios such as trade-off between corona virus and hunger virus, the wealth gain versus health loss, the health gain versus wealth loss as the case is in many countries, psychological disequilibrium due to loneliness caused by lockdown and isolation and different socio-economic mal-adjustment.

The paper is specially written using a highly simplified approach in response to the sudden change in the workings of the world system since the arrival of COVID-19 pandemic in the planet earth and this serves as one of very few studies drawing attention of world leaders to the need to be God-dependent and learn to always consider spirituality as a viable option in tackling emergency instead of concentrating all efforts on carnality even when it produces little or no result. The paper has analyzed the socio-economics disequilibrium and behavioral maladjustment resulting from COVID-19 pandemic from point view of economic and spiritual man.

The remainder of this paper is structured as follows: following this introductory section is section two, which presents a brief literature review follows by section three which presents the analytical procedures, analyzes the disturbances resulting from the COVID-19 outbreak, that is, the global economic shocks and the application of fiscal stimulus and its efficiency scenarios in ameliorating the pain and hardship created by COVID-19 outbreak. Next is section four which highlights some of the strategies employed to cushion the effect of the deadly virus on the economy. This is followed by section five which highlights some of the lessons learnt against future occurrences while section six concludes the paper.

2. Literature Review

The world is of age and as one grows older and older each day, new experience is gained in addition to previously acquired experiences. For instance, if the world has finally ended up two years ago, the experience of COVID-19 would not have met it here but while still existing, anything could happen. COVID-19 is not the first pandemic to break out on a global space. The literature provide insight into the historical records of outbreak of pandemic that have taken hundreds of millions of people away from this planet earth. According to World Economic Forum (2020) as echoed in the work of Abel, Anik, David and Suraiya (2020), a pandemic called Antonine Plague killed five million people in the early time 165-180, another pandemic called Plague of Justinian broke out between 541-542 killing between 30 and 50 million people, another pandemic called Japanese Smallpox broke out between 735- 737 killing one million people, another pandemic called Black Death broke out between 1347-1351 killing 200million people, another pandemic called New World Smallpox in 1520 killing 56million people, another pandemic called Great Plague of London broke out in 1665 killing 100thousand people, another pandemic called Italian Plague broke out between 1629-1631 killing 1million people, another pandemic called Third Plague broke out in 1885 killing 12million people, another pandemic called Yellow Fever broke out in the late 1800s killing between 100 and 150thousand people, another pandemic called Russian Flu broke out between 1889-1890 killing 1million people.

Also, between 1918-1919, another pandemic called Spanish Flu broke out killing between 40 and 50mllion people, another pandemic called Asian Flu broke out between 1957-1958 killing 1.1mllion people, another pandemic called Hong Kong Flu broke out between 1968-1970 killing 1mllion people, another pandemic called HIV/AIDS broke out in 1981-date and has killed between 25 and 35million people, another pandemic called SARS broke out between 2002-2003 killing 770 people, another pandemic called Ebola broke out between 2014-2016 killing 11thousand people, another pandemic called MERS broke out in 2015-date and has killed 850 people. COVID-19, the latest pandemic broke out in the last quarter of 2019 and since then the world has witnessed a dramatic change. This historical account of pandemic outbreak provides the right information that pandemic outbreak is not new and hence COVID-19 has come and man will also overcome it just as previous outbreaks have been defeated. In order to throw more light into the nature of infection from COVID-19, a large number of studies, for instance, Atkeson, Kopecky and Zha (2000) estimate and forecast disease scenarios for COVID-19 using a Susceptible-Infected-Recovered (SIR) Epidemiological Models developed by Kermack, McKendrick and Walker (1927). The models identified three states of health, first, Susceptible (S) who is at risk of getting infected, second, Infected (I) who is contagious, and third, the

Recovered (R) who has been previously infected but now has recovered. The dead people from the virus are said to be no longer contagious.

The assumption of the models is that those that are susceptible interact with infected people at a given rate and the people that are infected recover over time at a given rate and then acquired immunity. The models predict that eventually, the number of people that are susceptible start to fall since people continue to develop herd immunity against the virus. The probabilities associated with the different rates, that is, infection rate, recovery rate and mortality rate form the major parameters of the SIR models which help in simulating the efficacy of social and physical distancing rules. The missing fact in the SIR models as noted by another study is the overconcentration on public health outcome without considering economic outcome which could also triggered other health traumas. An attempt to solve one health problem which could create another health crisis. To address this problem, Eichenbaum, Rebelo and Trabandt (2020a) used a SIR-macro models to incorporate economic outcomes and confirm that the infection rate depends largely on the degree of interaction between agents when consuming or working and the possibility of contracting the virus by chance from asymptomatic carrier of the virus. The study also confirm the existence of incomplete information, infection externalities and risks across sub-population. In order to account for the incomplete information, Berger et al. (2020) develops a Susceptible-Exposed-Infectious-Recovered (SEIR) models based on Kermack et al. (1927). The study suggest that increasing testing of susceptible population should be put in place. To identify infected-asymptomatic patients and quarantining the subset of the population. For infection externality problem, Eichenbaum et al. (2020a) asserts that competitive equilibrium is not Pareto optimal as agents do not consider their actions affect the infection and mortality rate among other economic agents. In order to properly internalize the externality problem, the study suggests that the measures put in place to contain the virus are optimal if they are tightened over time in proportion to the spread of the virus. The study also noted that if a strict containment policy has been enforced right away from the beginning, it would have had a much more severe impact on the economy. Krueger Uhlig and Xie, (2020) has provided some explanation on how to flatten the curve of this pandemic, that is, how to reduce the infection rate. Some theoretical propositions on the behavioral responses to various changes in policy decisions as infection level changes have also been provided in the works of Quaas (2020) and Dasaratha (2020). The literature on this subject matter, though, very thorough and extensive, especially on the therapy and the economy, yet, there exist a gap in methodological approach. Therefore, this study fill this gap by approaching the topic from both the economic and spiritual man.

3. Analytical Procedures

This study employed microeconomic principles and rules to analyze the behavioral pattern exhibited in the wake of COVID-19 outbreak and the steps taken to contain the spread of the virus. The tools of analysis in this study are graphs and equations to convey the message of this paper. There are three agents involved in the drama caused by this pandemic. They are the household, business firm and government. The pandemic has caused confusions and commotion among these three agents because the three agents have different objectives and each would be interested in pursuing its own interest. This conflict of interest led to chaos and uproars that were experienced in many countries of the world. Government wants to maximize social welfare by ensuring lives and properties are secured, business wants to produce and maximize profit while the household wants to maximize utility. We could understand that these set of different objectives might be difficult to achieve during the pandemic period with the introduction of social and physical distancing as well as lockdown rule. The international and international airways were completely shutdown. Both the waterways and the highways were equally shutdown. Cross-border, inter-state and inter-city movements were completely proscribed. Government switched into action to embark on promulgating laws that violate the existing fundamental human right of individuals and business alike which they were enjoying in the pre-COVID-19 period. All these have cumulated into the various crises experienced in many countries during the pandemic period.

Analysis of COVID-19 Outbreak and the Global Economic Shocks: Economics talks of shock when an unexpected or unpredictable event that affects the economy either positively or negatively occurs. In a more technical manner, a shock is an unpredictable change in exogenous factors which may influence endogenous economic variables. Exogenous factors are factors that are unexplained by economics itself but factors external to economics, they are taken as given. Empirical literature suggest that market failure often leads to economic shocks. COVID-19 has really distorted the workings of the market systems causing market failure of global magnitude. Economic recession has been suggested as the end-results of shocks. Many studies have suggested different factors causing economic recession. Among these include; Stiglitz, (2010), Chauffour and Farole (2009), Petrakos (2014), Glassman (2001), Di Quirico (2010), Honkapohja and Koskela (1999), Morales and Sachs (1989), Adeniran and Sidiq (2018), Bagliano and Morana (2012), Bermeo and Bartels (2014). The outbreak of COVID-19 pandemic has led to many hard decisions taken by governments across countries, see, Jonathan (2020). We have border closure in every country of the world, barring of international travels and movements, shutting down of interstate movement even within country and the entire lockdown that keep people inside their homes without having anything to do with others in order to observe the social distancing rule and even physical distancing within homes.

These are costly decisions which have been the possible sources of economic shock particularly in the transport sector and its aviation sub-sector as well as other sectors of the economy. COVID-19 therefore, would have had an adverse effect on the people due to changes in key macroeconomic variables such as price, output and employment. There have been government intervention in form of fiscal stimulus giving out to cushion this effect. The efficacy of this however, varies from one country to another and from one individual to the other due to the level of development which also determines the initial endowment both at individual personal and aggregative national level. The economies from across the globe varies significantly in their absorptive power, so the shock may have greater impact in some countries while the impact may be low in some other countries. Also the memory of the shock may live long in some economies while it dies out shortly in some others. How long the memory of COVID-19 outbreak will take is a function of the absorptive power of different economies across the world. Using initial saving both at household, business firm and government levels as well as aggregating at national level, variation exists and such variations may be significant, for example the gap in real per capita income varies significantly between developed and underdeveloped countries. So also there is significant income gap between the rich and the poor living in less developed countries. This reveals the picture of the dualistic nature of human existence on the surface of the earth. This variation will definitely affect the ability of people to cope under the lockdown and isolation strategies of containing the COVID-19 outbreak.

It could also be recalled that before COVID-19 outbreak, people were enjoying their full fundamental human rights, no restriction of movement, nothing like closure of borders, nothing like stay at home rule, no market constraint, nothing like under-capacity utilization where people are given limited time to operate, especially limited time to open shops, offices, markets, etc., so life was full of engagement and enchantment, utility maximization process is as shown in Figure 1. People can move from lower level of utility to a higher level. There could be movement from IC1 to IC2, from IC2 to IC3, from IC3 to IC4 as shown in the figure. These movements represent movement from lower level of utility to a higher level. The pre-COVID-19 period was full of hope and aspiration, balanced emotion, optimism and desire for the best. The utility was maximum at IC4 in the figure confirming the equilibrium state of the economy before the upset caused by the outbreak of COVID-19 global pandemic and the strategies put in place to contain the spread such as social and physical distancing, isolation and lockdown. These strategies have their opportunity cost in term of psychological disturbances due to uncertainty, job lost, solitary life and loneliness resulting to disutility in which case utility drops sharply in the opposite direction as shown in Figure 2.

Figure 1: Indifference Maps Illustrating the State of a Rising Utility in the Pre-COVID-19 Period

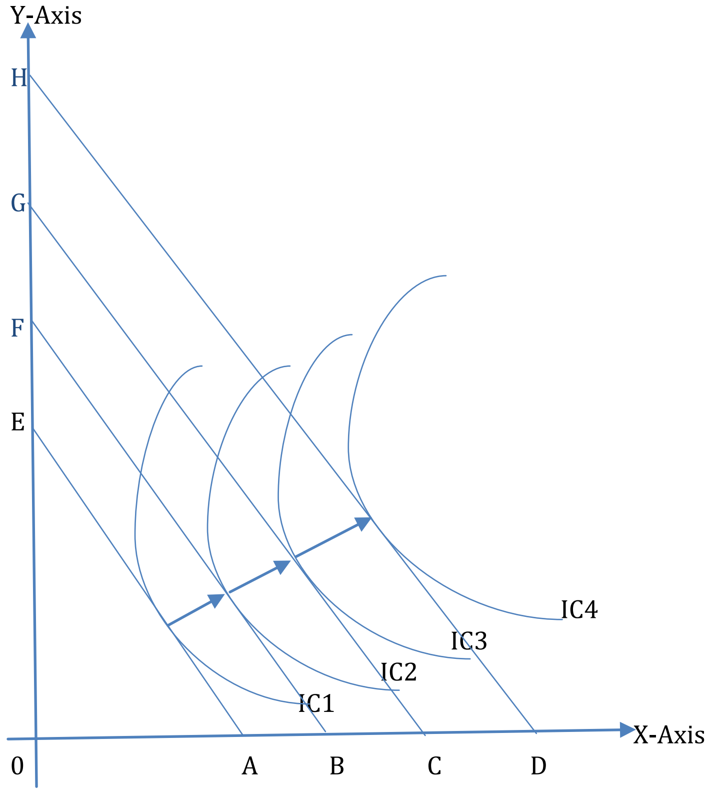
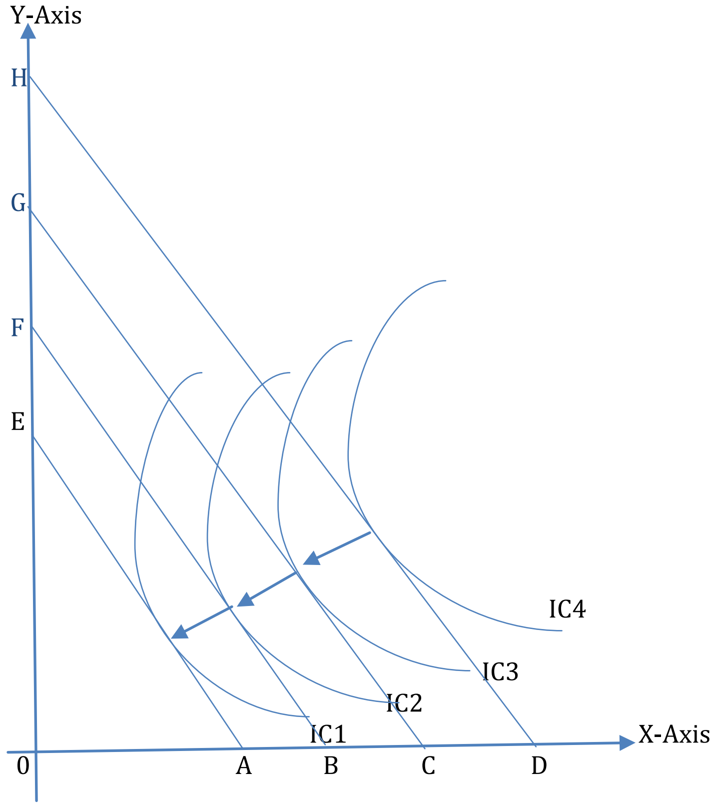


Figure 2: Indifference Maps Illustrating the State of a Falling Utility in the COVID-19 Period



The pattern of consumption behavior in the pre-COVID-19 period will never remain the same due to condition imposed by budget constraint. In the pre-COVID-19 period, the budget line experienced outward shifts which imply gains in welfare but the outbreak of COVID-19 pandemic has led to inward shifts in budget line which imply welfare loss as the case is in the COVID-19 era when there was a significant job loss due to a sharp drop in economic activities. This is shown in Figure 3 and 4. Figure 3 depicts outward shifts in budget lines showing a rising utility while Figure 4 depicts inward shifts in budget lines showing a falling utility.

Figure 3: Budget Lines depicting Pre-COVID-19 Economic Condition

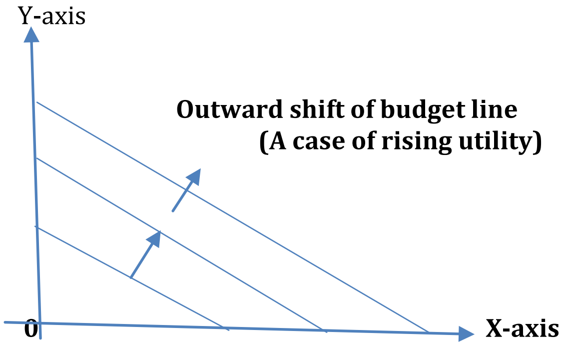
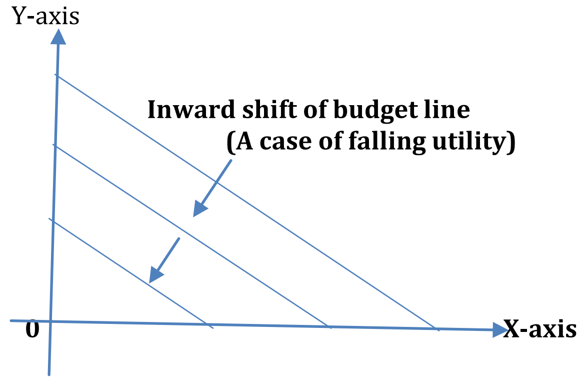


Figure 4: Budget lines depicting COVID-19 Economic Reality



Given a significant variation in endowment such as initial saving, household consumption behavior will follow a kind of linear function under COVID-19 crisis. In this case consumption during the COVID-19 outbreak will only be driven by individual household or on aggregative basis, individual country's initial endowment. Some households or countries with low initial endowment will consume low during COVID-19 crisis and will be more severely hit than those with higher endowment. Similar view is shared in the work of Jonathan (2020) which stated emphatically that investment was low in the pre-crisis period and this cumulated to high death rate in the crisis period. The crisis therefore caused the inevitable recession which is believed to cause more deaths due to deterioration in physical and mental health, rising suicides and many related misfortunes associated with recession. Several causes of economic recession are documented in the literature particularly, Jagannathan, Kapoor and Schaumburg (2013), Petrakos (2014), Aisen and Veiga (2013, Lagravinese (2015), Giugni and Grasso (2016), Bernburg (2016), Larry (2020) and even, Keynes (1936). There is no doubt COVID-19 pandemic could cause another major global economic crisis since the spillover effects are grievous on economic activities within countries and across countries of the world. Individual households within countries as well as individual countries across the globe differ in initial endowment and hence the effect of any recession might vary across board.

The worse scenario is a situation where the individual households' or individual countries' endowment is zero. This implies that the consumption during the COVID-19 crisis is only a linear function of current income since the initial endowment is zero. These situations can be depicted better using equations as better tools of analysis. Let consumption be expressed as a function of initial endowment and current income. The COVID-19 crisis affected all sources of income. Given a simple income model of the form

$$Y_t = w_t + k_t + l_t + e_t \tag{1}$$

Where

$w_t = wage\ income\ during\ the\ period\ t$

$k_t = interest\ income\ during\ the\ period\ t$

$l_t = rent\ income\ during\ the\ period\ t$

$e_t = profit\ income\ during\ the\ period\ t$

It is no gain say that during COVID-19, these various sources of income are blocked temporarily because of various measures put in place to prevent the spread of COVID-19 pandemic and this may shrink the aggregate income Y_t for some and for some the current income Y_t would have become zero.

The consumption function in the pre-covid 19 period takes the form

$$C_t = A_0 + \beta Y_t + \Theta Y_{t-1} + u_t \tag{2}$$

Where
Y_t is the current income
Y_{t-1} is the past income
u_t is unobserved phenomenon otherwise called the error term in the consumption function

Equation (2) can only represent the condition of a limited set of people whose consumption depends both on the current and past income and which may be insignificant, hence the equation may thus be altered slightly by integrating the two period incomes together as determinant of current consumption and this becomes

$$C_t = A_0 + \phi(Y_t + Y_{t-1}) + u_t \quad (3)$$

ϕ in equation (3) is the marginal propensity to consume which lies between zero and one.
That is, $0 \le \phi \le 1$ and $\phi = \beta + \theta$, hence, $0 \le \beta + \theta \le 1$

Where ϕ is closer to 1, saving from both current and past income would be very close to zero if not zero, so also the endowment (A_0). But

$$A_0 = f(Y_{t-1}) \quad (4)$$

Endowment depends on savings from past income and where such tends to zero, then the endowment also approximate to zero that is, as $\phi \approx 1$, savings tends to zero likewise the endowment. However, in the COVID-19 period, consumption may now be a dependable function of past income since the current income suddenly becomes zero due to the total shutdown of the economies across the globe which ground economic activities to zero in many countries of the world. So, the current income Y_t suddenly approach zero and consumption function reduced to

$$C_t = A_0 + Y_{t-1} + u_t \quad (5)$$

Since past income (Y_{t-1}) determines the initial endowment (A_0), so either of these would be used as explanatory variable in the consumption function, so, we have equation (5) becoming

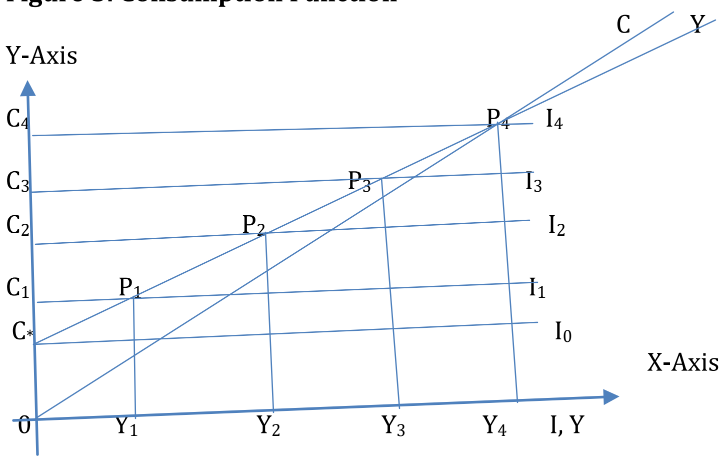
$$C_t = A_0 + u_t \quad (6)$$

As initial endowment A_0 tends to zero,

$$C_t = u_t \quad (7)$$

Both initial endowment and current income affect onsumption behaviour of individual household and individual countries at aggregative level. Let equations 3, 6 and 7 be three cases represented by C_1, C_2 and C_3 with $C_3 < C_2 < C_1$. In this case, C_3 is more badly hit with COVID-19 pandemic and is more apprehensive of the hunger virus which is the opportunity cost of the corona virus. Unless people in this category are reached by any of the palliatives put in place to cushion this shortfall, there is tendency for hunger virus to wreck havoc. Graphically, this situation is illustrated in Figure 5 depicting consumption as linear function of current income and initial endowment. $0C_*$ is the autonomous consumption, it is consumption when income is zero. It is very important to note that while income can be zero, consumption cannot be zero, hence, consumption line does not emerge from the origin. At current income $0Y_1$ and initial endowment I_1, consumption is $0C_1$ at point P_1, at current income $0Y_2$ and initial endowment I_2, consumption is $0C_2$ at point P_2, at current income $0Y_3$ and initial endowment I_3, consumption is $0C_3$ at point P_3, at current income $0Y_4$ and initial endowment I_4, consumption is $0C_4$ at point P_4, but $0C_1 < 0C_2 < 0C_3 < 0C_4$. Individual households and countries with low initial endowment would be more hit than those with higher endowment. Endowment is a function of saving from past income. Where saving is absolutely zero, endowment is equally zero. As income rises, there is tendency for saving and endowment to rise. In low income countries, or among low income earners, there is tendency for saving and endowment to be equal to zero putting undue pressure on countries or people in this category to meet up with daily consumption requirement that triggered into crises during the COVID-19 pandemic.

Figure 5: Consumption Function



Analysis of COVID-19 Pandemic, the Fiscal Stimulus and Efficiency Scenario

Since the outbreak of COVID-19 global pandemic, governments from various countries have engaged in one kind of fiscal stimulus or the other to cushion the effect. Some empirical evidence on the use of fiscal stimulus to cushion the effect of COVID-19 pandemic are provided in the works of Ozili (2019) as well as Ozili and Arun (2020). In some countries cash was given out to the citizen to smoothen out consumption to fill the income gap due to lockdown and stay at home order which keep people out of employments. Incomes from employments become very unrealistic due to shutdown strategy to contain the deadly virus. Many countries applied the shutdown strategy and this put all forms of economic activities to a halt with exception of few that have to do with essential commodities such as foods, medicines and other life-supporting goods and services. This strategy has kept many people out of employments and since consumption is a must, government provisions in form of sharing.

In cash and kind to the people concern become necessary in some countries, the fiscal stimulus comes in form of palliatives such as foods, water, medicines and the likes. In some countries, it comes in form of cash. The efficiency of these various government interventions across countries, can not only be determined on the basis of accessibility and delivery strategy to individual households that are worse hit by this deadly virus but also by initial saving condition of the people. It also depends on the proportion of population covered in the sharing and the ease of distributing these palliatives. In some countries the mode of sharing the palliatives was so fantastic, well organized without necessarily causing violation of the social and physical distancing rule which is the major objective of stay at home and lockdown rule to avoid the spread of the virus. In some countries, it was like a thug of war, the atmosphere was that of chaos and struggle leading to the breaking down of physical distancing rule as people struggle to get their share since the laydown rule has been broken and no one is ready to wait and see what is being shared finished while still on the queue for the fear of hunger. This quickly revealed the trade-off behavioral patterns between corona virus and hunger virus of many households who risk corona to avoid hunger for the fear of hunger virus is the beginning of wisdom.

This behavior is a proof of the reveal preference theory. The preference for food and other life-sustaining goods and services are strong indeed that people prefer to sacrifice the chance of being invulnerable to corona virus for the chance of being vulnerable to hunger virus. This revealed preference testifies to the fact that there is high incidence of poverty in many countries especially under-developed countries and if the world is really a global village, it should be of great concern to many of the rich and highly developed countries in this so-called global village to urgently do something on how to re-distribute the world resources to reduce the incidence of poverty so that everyone can have access to the basic life-sustaining goods such as food and water for COVID-19 scenario has revealed that people fear hunger a times more than any deadly virus. The resistance to lockdown in most less developed countries was caused by fear of hunger as people lack the basic needs of sustenance due to absence of savings. People lives from hand to mouth, they depend on daily income to take care of daily consumption. In the absence of saving, the lockdown rule would definitely mean eternal hell to people in this category and there will be a great resistance to lockdown rule from people whose marginal propensity to consume is almost 1.

This also might be the reason for crime rate to be very high since people prefer to take some risk of indulging, in illegal businesses or transactions for the little income gain associated with such behavior, just for them to survive. Reduction in global poverty may also help to reduce the global crime rate as it were especially in the post-COVID-19 era. The trade-off between hunger and corona virus is determined by the marginal propensity to consume and marginal propensity to save. Figure 6 depicts the relationship between the marginal propensity to consume and the marginal propensity to save. The relationship is negative as the slope of the line graph is negative. When the marginal propensity (mpc) is one, the marginal propensity to save (mps) is zero and there is high tendency for people to resist the lockdown ready to trade-off hunger for corona virus. In this case, people prefer to take the risk of corona virus by boycotting the lockdown rule instead of stay indoors and risk hunger. On the other hand, when the marginal propensity (mpc) is close to zero, the marginal propensity to save (mps) is close to one and there is high tendency for people to obey the lockdown to avoid the risk of corona virus infection because there is hope of having access to food and some life-sustaining goods guaranteed by initial saving. During the COVID-19 and the lockdown experience, the demand only changed in favor of necessity mainly food and other life-sustaining items. People manage what they have on necessity and the demand for luxury becomes automatically zero. At various points on the line where marginal propensity to consume or to save is in-between 0 and 1, especially at points M and N there is trade-off between hunger and corona virus. In this case, the preference to take risk of corona virus decreases as marginal propensity to save increases towards 1 or tends towards unity.

It is important to note that the behavior of households is governed by the ability to meet daily obligation as nature imposed on man, so, any policy of government will suffer less resistance especially in poverty-stricken regions of our world if policy maker can engage in policy strategy that boost income of so-called poor masses so as to enhance the marginal propensity to save and reduce the marginal propensity to consume. This makes lives to be more meaningful and secured especially during emergency; people can still exhibit a normal behavior and make governance easier for those in government. Policy makers should know that, it is much easier to manage and govern someone who exhibits a normal behavior than to manage and govern someone who exhibits abnormal behavior caused by hunger and social exclusion. A growing concern for health would definitely reduce wealth outcome while on the other hand, a growing concern for wealth has serious implication on health outcome. The citizens in different countries are calling for easing the lockdown rule to boost wealth outcome but the authorities are looking at the opportunity cost in term of health outcome. Authorities would have loved to create wealth by easing the lockdown rule if the probability that such a decision will not jeopardize the public health is high. So, there is unhealthy competition between decisions to create public wealth at the expense of protective public health. The choice is to be made between protective public wealth and protective public health. To make the optimal choice in this case, authorities need to first find out if there is a cause-effect relationship between wealth and health asset of citizens. They must strike a balance between wealth and health asset. Figure 7 shows the trade-off between wealth and health assets. At point A, health is absolutely considered by the authorities in easing the lockdown rule, no consideration for wealth asset. Also, at point B, wealth creation is solely considered in the decision to ease the lockdown, there is no consideration for health asset.

The decision at points A and B may be undesirable considering the general saying which says “health is wealth” and the possibility of a reverse causation which affirms the statement that says “wealth is health”. The first statement which states that “health is wealth” emphasized the role of health in wealth creation while the second statement that reads “wealth is health” underscored the role of wealth asset in creating health asset. A hungry man is a sick man, so, hunger virus may be as deadly as corona virus. This is supported by the kind of heavy protests and resistance by people across countries of the world against lockdown and stay at home rule. People demonstrate their displeasure with total lockdown because of greater opportunity cost associated with this. Domestic violence against women, children and the vulnerable were reported in many countries due to continuous lockdown rule. Government across countries have no choice than to begin to shift ground on the total lockdown rule since economic health of individual goes a long way to determine general condition of health of such individual. So, health is not defined from the perspective of biological health alone, the overall state of health of an individual is determined not only by biological health but also by economic health, psychological health, mental health, social health and spiritual health.

The lockdown rule has created an unusual mode of protecting biological health but in jeopardy of economic, psychological, mental, social and spiritual health of the people. See, Davillas and Jones (2020), Chatterji and Li (2020), Tubadji, Boy and Webber, (2020), de Pedraza, Gusi and Tijdens (2020), among others for further exposition. Authorities' attempts to protect biological health of citizens are seeing to be counterproductive since they are indirectly jeopardizing economic, psychological, mental, social and spiritual health. Public health safety therefore should not be seen parochially from biological health point of view alone but holistically from point view of economic, social, psychological, mental and spiritual health. From Figure 7, authorities must give consideration to both wealth and health assets. Operating at point G implies a trade-off between health and wealth asset. Instead of 0A of health asset with zero of wealth asset, we now have 0F of health asset combine with 0K of wealth asset. Authorities are considering taking some health risk to get some economic gain so that the pain associated with sudden loss of wealth can be healed gradually.

Figure 6: Hunger and Corona Virus Trade-Off (mps and mpc nexus)

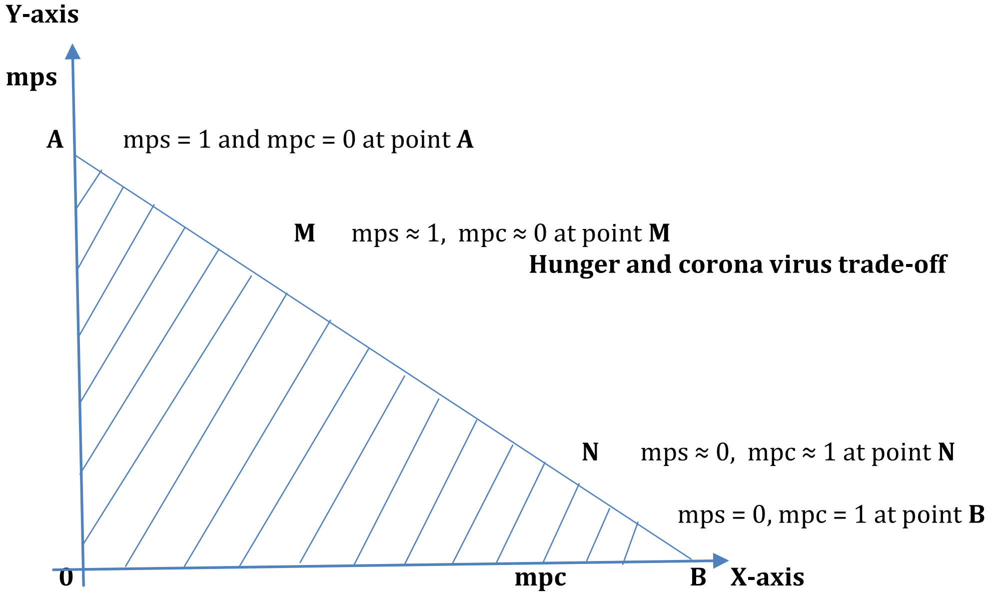
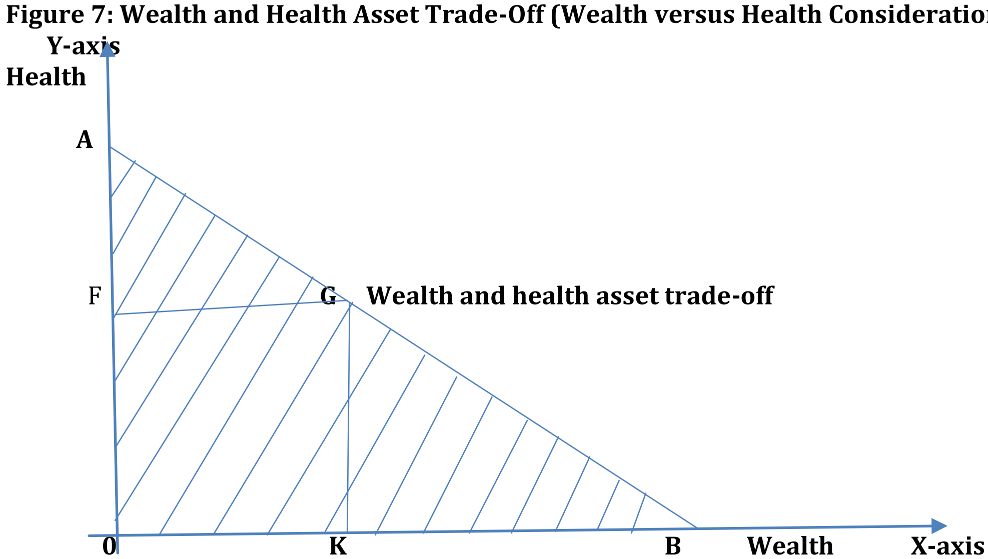


Figure 7: Wealth and Health Asset Trade-Off (Wealth versus Health Consideration)



4. Strategies that could be employed to cushion the Effect of COVID-19 on the Economy

There is no gain say in the fact that COVID-19 has ruined the world economy. Studies such as Ozili (2019), Ozili and Arun (2020) and Larry (2020) among others have provided some details in support of this view. The world is of age and it is generally believed that experience is a function of age. As one grows older each day, experience is gained. The experience of global economic melt-down occurred in the 1930s following the crash in stock prices in 1929. It also occurred in the 1970s as well as 2008 that of the 1930s is often referred to as the Great Economic Depression in history, with the failure of invisible hand to resolve the unemployment crisis for supply failed to create its own demand and unemployment problem persist before the Keynesian interventionism. The current experience might be a worse scenario considering the number of deaths and expected changes that may take place in the world system due to this pandemic. Only time and events could tell whether the situation could be described to be worse than the experience of the so-called global economic melt-down of 1930s.

Policy makers, health experts and economists as well as concerned stakeholders have been brainstorming on the best strategy to address many problems that this pandemic has caused for the entire mankind living in developed and under developed countries. This pandemic has separated us more than any war could have done, America is closed against Europe, Asia is shutdown against Africa, Australia is now only for Australian, no entry of nationals from other countries, this is the greatest separation in history, it happens from world level to continental level to individual country level to regional level to state level within country to local or county level within state to ward level within local or county area, and there is an adage which says in unity lies strength. International and regional or international trade suddenly becomes history in our new world as autarky becomes the order of the day. This pandemic is a threat to our economic and social existence. It has crippled economic activities putting too much pressure on government finances since government stimulus including social security expenditure would definitely pushed government to spend above her revenue leading to fiscal deficit. The revenue earning power of government has falling while the need to hike expenditure has plausibly materialized.

Borrowing may become a necessary source of raising funds to finance the deficit. This has a great implication on debt burden especially in countries with high debt profile even before COVID-19. Living a solitary life is alien to our world system. Kissing, hugging and handshaking suddenly become an aberration, face to face talk without the use of facial mask suddenly become forbidden. The group life, in our mode of worship, our market places especially in less developed countries, in entertainment and sports arena, etc. has become threatened and we are yet to know whether the status quo is still possible or whether a paradigm shift has finally occurred. The role of government in the management of the economy cannot be over-emphasized especially during this period of time when the economy crashed into a recession and finally looms in depression. Millions of people across the globe are now out of employment, many businesses have been shut down, millions of people have been infected and are under treatment and yet to know their fate though the recovery rate is a little bit impressive in some countries, hundreds of thousands of people who could either have been job providers or highly skilled employees have died resulting to human capital loss to the economy. It takes time and use of highly competitive resources to train people to replace the lost wealth of experienced individuals who have been a victim of corona virus. What can be done is the adoption of pulling strategy, in which global resources are pulled together and allow to spread out to cover the entire countries in the space such that the effect will not be too heavy in one region and we can share the whole burden and lighten it away to regain our lost world from the corona virus. The world needs to intensify the need to expand access to online digital technology so that our world can be more connected electronically given the constraints. Electronic exchange can be facilitated through digital technology to generate online employment and income for the households. The broader online digital technology access can help to ameliorate the effect of COVID-19 if it is widely available to everyone irrespective of countries or region of births. This is the time to deal with the problem of digital divides between the rich and poor nations of the world as well as between the rich and the poor individuals living in each country of the world. Both monetary and fiscal measures are also needed in this trying period. See, Gourinchas, (2020), Abel, et al. (2020), Bianchi, Faccini and Melosi (2020) for detail exposition on these measures.

It is also important that monetary policy be conducted in such a way that the monetary policy rate would be optimally decided in line with the economic reality. Interest rate should be so low to encourage new investors to take up investment opportunities available in the post-COVID-19 period. Fiscal stimulus to households and business firms should continue until the economic activities are fully restored so as to prevent the collapse of household and business sectors. All forms of taxes including the value added tax (VAT) should be suspended for now to allow the economies to pick up again. It is glaring that in this kind of period, there is need for budget deficit and where the finances occurs through borrowing, it poses a high debt burden on the economy. Most of the countries' debt profile has grown up rapidly and becomes very abnormal in this COVID-19 period, it is very important for debt re-scheduling and debt forgiveness to lessen the burden imposed by the COVID-19 pandemic. The creditors either group of lenders or international financial institutions should consider poor and highly vulnerable countries for debt forgiveness to enable them rebuild the downturn economy. The post-COVID-19 world leaders should be watchful of on-going events and activities in another countries and should be able to pull global resources together to track any unhealthy move that could be a threat to the global existence. As we can see, every nation of the world has paid and is still paying their own prices during the COVID-19 pandemic. No nation is spared in the pain and setback caused by the pandemic which has changed the behavioral pattern of our known world and gives us a new world of strange behavior with her socio-economic mal-adjustment. The time has come when countries of the world must be ready to pay their due diligence in their oversight function to ensure the activities going on in one country will not come back to become a burden or a price that the whole world community would inevitably force to share. The desire to achieve speedy economic progress by any country should not be done in jeopardy or at detriment of our global existence. No nation in the world is spared by COVID-19, meaning that every nation would have paid their own prices in whatever form. It would have been better to go for the use of defensive approach rather than offensive for prevention is better than cure. The world could have been better off if COVID-19 has been detected earlier and captured without allowing its spread. The world would have witnessed a few or no victim.

More importantly, the missing link in human achievement is the fact that man usually fail to acknowledge the supreme authority over every achievement. The truth of the matter is that no success or failure without the supreme authority. Whenever experienced a shock, man, in most cases bother not to search for the cause beyond humanly possible scientific approach. Models are mostly tailored towards a scientific school of thought whereby every shock must have humanly possible explanation which can be explained scientifically and where such solution is ineffective or is not even readily available, man have always failed to use the only left available option which is the supreme authority. Man from generation to generation have preferred carnality to spirituality in their efforts to rescue humanity. On many occasion, it never works that way since many of the problems facing humanity first appear in the spirit and must be first of dealt with in the spirit. God is the supreme authority and whenever there is a shock above human explanation, man should be ready to immediately do away with pride and seek divine intervention to get to the root of the problem. God is the owner and giver of all knowledge, any nation or group of nations leading the world today may not be the one to be in charge tomorrow because, the Giver has the power to change who the leader should be at every point in time. If God has not given you such power and you want to have it at all cause, you will be disappointed because it will lead to destruction. Although God has given man power to do things that are super through research and innovation and many a times.

It takes some time before scientists have breakthrough over many discoveries, for instance Charles Babbage invented analytical engine which failed to work during his life time but began to function one hundred years after, leading to the development of modern day computers. One cannot over-emphasize the benefits of computer to human existence on the planet earth today. God in His infinite Mercy has always being supportive to man in their efforts to make further discovery of many hidden phenomena that will be of mutual benefits to the entire world but man must not fail to remember God first in any event so that God can give man a direction to follow in achieving great things. In this COVID-19 pandemic, the world leaders should always remember to put God first whenever they seek solution so that the suffering of mankind from any negative effect of shock can be minimized because of prompt intervention of God who can unfold things that are in the secret and give the world leaders the direction to go so that they would not have suffered unnecessarily for too long. If leaders would seek God earlier in emergency, it would minimize the pain and

hardship on their subjects since God prompt intervention is enough to have given the leaders the direction to take to get out of the problem. A blind leader is a curse to the followers and the consequence is grave.
Using a simple econometric model to explain this better,
Suppose

$$G_t = G_0 + \Omega H_t + U_t \tag{5}$$

G_t represents the global phenomenon which can be explained by H_t and U_t
Where
H_t = the known factor determining global phenomenon G_t, and
U_t = unobserved factor deternining G_t

This unobserved phenomenon is not under the control of the modeller and it is the one that will really determine whether the model has done well or not. If H_t represents all the known factors affecting G_t, then U_t represents the unknown factors or unobserved factors which could be likened to the supreme authority, the invisible hand that rules the universe. As the modeller diagnosed U_t to find out how well the model explains the phenomenon it sets to explain, G_t in this case, man also need to always consult God in unfolding unforeseen events. This is where the need to consult God first hinged on. For without God, man cannot achieve any reasonably good thing in this life, so in dealing with coronal virus, there is nothing stopping every leader in their respective country, despite the medical reinforcement put in place, to still go extra mile by declaring one day, two days or three days of prayer to seek the help of God to wipe out corona virus in every corner of our world so that lives can be worth living. With the number of deaths recorded on daily basis in many countries caused by COVID-19 pandemic. See, John Hopkins University (2020a, April); John Hopkins University (2020b, May)

There is the need for the world leaders to consider spirituality as a viable option in their struggle to stop this unusual deaths and to destroy corona virus completely. A virus is a microbe. It is one of the many microscopic organisms found in the animal kingdom as created by God and I am sure corona virus is not created today and even if this particular one is a man made virus, who created man itself? If it is a man-made virus, God is the supreme authority who can handle situation that become too scary and unmanagable to man. For God to help us in the time like this, we need to turn to Him and humble ourselves before Him. We must have faith in Him and trust Him completely. He will surely surprise us and show us mercy. Corona virus, whether naturally made or man-made, will be deactivated and distroyed completely by our God, who is the chief controller of the universe, so that we can have our normal world back. God, who created all viruses is absolutely powerful enough to deal with any virus that want to dislodge humanity away from the planet earth. Without any weapon of war, without ordinary guns, or machine guns or any missile, ballistic or cruise missile, the world has recorded about four hundred thousand deaths with over four million people infected between December 2019 and May 2020, just in less than half of a year. It is high time the world leaders led their followers back to their maker to retain our world of modesty, peace and healthy living. In the time like this, when human solution or intervention becomes less effective, too slow and weak, grossly inadequate or atimes failed to yield the desire results, man must scale up the hope and faith in their Creator and go absolutely for Divine Solution.

5. Some Lessons Learnt against Future Occurrences

COVID-19 has exposed the vulnerability of all nations to any eventuality. It has taught us the lessons of our lives that God is supreme in all events. It is only God that can be said to be untouchable, unbeatable, infallible and unthinkable. Before the outbreak of COVID-19, nobody could ever thought of it that something of this nature could happen that would have overwhelmed our big nations, the so-called technologically advanced and developed countries of the world who have so much to give to counter unforeseen events and to checkmate its attendant consequences. It is important to put more of our trust in God's provision than man-made provision which can fail or disappoint us at a time we least expected. Technology can fail, knowledge can fail, power can fail, human medical prescription can fail but God can never fail. When all humanly designed mechanisms failed, we learnt that we should not hesitate to seek God who stands on top of all problems or challenges. It should be noted that the permanent solution to COVID-19 pandemic is God, once we call God to intervene in the battle against corona virus, the virus dies a natural death and the end of

COVID-19 pronounced. God's solution is permanent and once God decrees to end the corona virus, all is over, no second wave, or third wave upsurge in corona virus death or infection.

The COVID-19 period shows a significant, dreadful and abnormally high mortality rate in developed countries where human lives are just so special and valuable. Hospitals were overwhelmed, mass burials were found as if lives worth nothing again. See the latest update of deaths, infection and recovery rates in John Hopkins University websites. The lesson is also learnt that nothing is permanent, we saw how a world of global village suddenly turned to a world of isolated cities. Life is short and hence should be treated as such, no man can accurately predict tomorrow, we own today but tomorrow is not under our control so whatever we can do today should not be postpone till tomorrow because only God knows what tomorrow looks like. Among people that have died in this COVID-19 period, many would have had some proposals for this year and years ahead but which the sudden event of COVID-19 pandemic would not have allowed them to implement such proposals. Many people that have become unemployed today never thought it could happen because there was no signal or pre-information for anybody to stay out of being a victim. Many CEOs, most especially those from the aviation sector never thought their organizations will dry up shortly before the end of first half of year 2020 but they are all victims of reality. During COVID-19 period, home becomes the safest spot to stay safe, hence, it is important to ensure we secure a healthy and ideal home because whenever there is emergency, we will have a secure place to stay safe. This should also remind us of our heavenly home, after the journey to this world is over, we must surely return home, so every witness of COVID-19 pandemic should always be mindful of how they are building there eternal home so as to stay safe eternally at the end of their journey in this world. Do you really have a home? A food for thought.

The wide inequality between the rich and the poor proved unnecessary during COVID-19 period since the need of both reduced barely to the basic need such as food and other life-support goods and services, all put together as necessity, no room for luxury. The markets for luxury were shutdown since at this time, demand for luxury has temporarily become zero. The lockdown and stay at home rule almost equate everybody. The gorgeous clothes in the wardrobes of many rich people, the shoes, exotic cars, and many luxurious goods become temporarily useless in the COVID-19 era where everybody was mandated to stay in his/her home, no social gathering of any kind, no party nor club meetings, no travel, whether interstate or international, all tourist centers closed, all sport schedules postponed, etc. The main objective of every government is how to get rid of corona virus. Health sector attracted so much of private and government spending. A lot of money went into the sector to boost health infrastructure to be able to contain the corona virus. Health workers received better attention and motivation to put in their best in the fight against the deadly virus. Life is short and hence should be treated as such, no man can accurately predict tomorrow, we own today while tomorrow is not under our control so we should not procrastinate whatever we can do today.

Moreover, It becomes glaring that the pre-COVID-19 health sector in many countries was underfunded and hence, deficient, in infrastructural capacity to respond favorably well during emergency. It is important to be proactive instead of being reactive, prevention is better than cure. People should also learn how to conserve during the period of surplus because we cannot predict what comes next. Those that have good culture of saving were better off during COVID-19 than those that eat all. Eating all means zero saving, all consumption. There is need to make provision for the raining day as depicted in the liquidity theory developed by Lord Maynard Keynes. One of the three motives for holding money is precautionary motive which has to do with unforeseen contingencies like sudden events such as natural disaster, sickness, and pestilence, just like the COVID-19 that just came suddenly and reduce the world to a death factory. It must be said at this point in time, this present world is not a permanent home and man should desist from unusual habit of holding this world as a permanent place of abode. Resources of this world should be shared so that everyone can live a minimal lives expected of a normal person. There is no need for frivolous and conspicuous consumption. Authorities therefore should device ways of pulling global resources together to fight poverty just as the world is fighting this corona virus since poverty itself is a common virus responsible for many abnormal and anti-government behavior in our world.

Conclusion

This paper examined the socio-economic changes and behavioral maladjustments following the outbreak of a viral disease popularly known to be COVID-19 with its origin traced to Chinese city of Wuhan. The outbreak was learnt to begin towards the last quarter of the year 2019 but the cause was yet to be unfold by the world powers only for the effects to have been found in every country across the globe. The paper discussed the demand and supply shocks resulting from the pandemic as well as the efficacy of the fiscal stimulus provided by the government to cushion the effect on the people and the economy. The post-COVID-19 implication of this high government expenditure regime which is mainly a regime of fiscal deficit on debt burden especially in countries with high debt profile even in the pre-COVID-19 period was critically examined. The paper underlying some of the damages done to the socio-economic lives of people across the globe and highlight recovery strategies with some lessons learnt and future prospects. The paper therefore concluded that the memory of the shocks created by COVID-19 pandemic may stay longer than expectation but could have proved the supremacy of God and the state of helplessness of man in some unforeseen events as a microbe of invisible property reduced our world of global village to a world of isolated cities.

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 12, No. 4, August 2020 (ISSN 2220-6140)

The Effect of Capital Structure, Liquidity, and Company Size towards Profitability

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Abstract: This study aims to determine the effect of capital structure, liquidity, and company size on profitability in state-owned companies listed on the Indonesian state-owned enterprise website in 2016 - 2018. This research uses a quantitative approach. This study uses secondary data from company financial and annual report, the sample consists of 65 stated-owned companies. The data analysis technique in this study uses multiple linear regression, classic assumption test, and the hypothesis test consists of the t-test. Based on the results of data analysis known that capital structure has a insignificant negative effect on profitability, liquidity has a significant positive effect on profitability, and company size has a significant negative effect on profitability. The results of this study are expected to be useful for managers in making decisions related to company management, beneficial for investors in choosing investments, and being useful as a reference for further researchers who studying profitability variables.

Keywords: *Capital structure, liquidity, company size, profitability.*

1. Introduction

The main objective of a company is to generate revenue, which becomes the indicator of success of a company, from its operational aspect. If a company wishes to maximize its revenue, the company must be able to utilize the resources it possesses, such as the capital required, a place to obtain that capital, as well as good planning regarding the return of capital obtained, which will become revenue. One of the methods to increase revenue is by valuating the capital structure of the company (Abor, 2005). The manager is an agent who is given trust by the principal, or owner of the company, in running the company. Each activity done by the company is very dependent on the decision of the manager. A manager must be able to decide whether the company will continue or halt. Aside from that, if the company is at a halt, the manager must be able to resume it and return the company to its course (Dawar, 2014). This is why a manager must be able to decide the level of revenue that a company wishes to achieve. The agency theory is based on the contractual relationship between the owner and shareholders, with the management or manager. In deciding this, a manager must also decide how the revenue is obtained using available.

Operational (Podile, 2018), in selecting a capital structure, a manager must take caution to not take the wrong step and also be able to maximize revenue so that it is equivalent to the capital's rate of return. Aside from capital structure, a manager must also have responsibility over the decisions taken to run the company, as well as how much revenue is generated, which will measure the size of the company (Mule et al., 2015). Development in developing countries such as Indonesia focuses more on its economic development, due to the economic underdevelopment. Development in the field of economics greatly supports the achievement of changes and renewals in other sectors. This process does not occur instantly, but requires a relatively long time, through various consistent methods and efforts, in order to promote the welfare of Indonesian citizens. One of the actions that support national development in the field of economics is the creation of State-Owned Enterprises (BUMN/SOEs), in which this planned change increases Indonesia's revenue nationally. This is also one of the policies made by the government to decrease social discrepancies, and promote the welfare of the people (UU RI 19, 2003).

One of the issues in SOEs is in the sector of agriculture, forestry, and fishery, which are prone to losses since the performance of the companies are not satisfactory. This is explained in the financial performance report of SOEs in 2018, in which this particular sector obtained the lowest score regarding the ability of the company to generate revenue and pay off liabilities (Rika, 2019). Aside from this sector, there are many other SOEs who have many issues, especially in the company's finances. There are also SOEs that went bankrupt due to the company's inability to generate revenue, which also affects the company's ability to pay off its liabilities. Due to this, in SOEs, the existence of profitability in supporting operational needs and the goal of the company is fundamental. This is due to the fact that SOEs were created for two purposes, which is to generate revenue as a company, as well as improve the national economy and the people's welfare as a driving force for the economy in Indonesia (PP No 12-13, 1998). This is the basis of the execution of this study, which is to measure the effects of capital structure, liquidity, and company size towards the profitability of State-Owned Enterprises (SOEs).

2. Literature Review

Theory: This study utilizes the agency theory. The agency theory is based on the contractual relationship between the owner and shareholders, with the management or manager. According to this theory, the relationship between the owner and manager is intrinsically complicated due to the conflict of interest between the two parties (Aswar, 2019). An agency relationship presents itself in the agency theory when one or more parties (principal's party) employs another party (agent's party) in providing a service (service to run the company), and afterwards delegate authorities in all decision making in the entity to the agent. In order to create a smooth contractual relationship, the principal delegated decision-making authority to the agent, and this relationship must be arranged in a contract, which is usually based on the accounting numbers attached in the financial report. Conflicts of interest are the basis of the agency theory, in which contracts are designed to ensure the consistency of the agent's and principal's interest (Cole & Scott, 2000). The agency theory has a close relationship with profitability, since the main objective of a company is to generate revenue, in which revenue originates from the operational activities if the company, which is run by the manager (agent), according to the instructions of the owner shareholders (principal).

Therefore, a manager must be able to maximize the company's profitability in order to improve the quality of the company, to benefit all parties related to the company, including the manager itself, in which its duties as an agent affects the increase of bonuses for the agent itself. An example of this is using the manager's decision for the capital structure of the company. If the manager is not cautious in benefiting this, then the revenue goal that is expected will not be achieved because of wrong steps taken from the decision of the manager. The agent is also responsible for the company's decision in choosing, borrowing, and also paying back liabilities that are used as the drivers of the company's operations. The ability of a manager in controlling these aspects can cause the company to have a good liquidity rate, which will increase the trust of creditor banks towards the company, should the company choose to borrow again to the creditor. A company is rated well if it can benefit from these aspects, and the more assets a company has in regards to its revenue as well as the ability of managers to control liabilities and the company's capital, then the company's size will increase. The larger the size of the company, the higher the quality of the agent. This is the reason why agents are fundamentally influential in the increasing of a company's profitability.

Hypothesis Development: Profitability is often used as the basis in assessing a company in its financial performance aspect, since revenue is the essence of every business, and without it, a business will be lifeless. After research and hypothesis testing, the researcher concludes several results from the hypothesis testing. Therefore, the development of hypothesis in this study is based on factors that are suspected to have an effect towards the increase and decrease the profitability rate of the company.

Capital Structure: In a company, capital is a fundamental item in the operational function of the company. Without capital, a company cannot exist. Capital structure is a significant management decision since it significantly affects the return of owner's equity, risk, and market value of shares. Due to this fact, the management must increase the capital structure which should be relevant and in line with the company's operations. A previous study conducted by Salawu (2007) concluded that the effect of capital structure towards profitability in Nigerian companies show that there is a positive correlation between profitability and capital structure. An increase in the value of capital structure will increase profitability. This is a logical assumption for the positive relationship between capital structure and profitability. Therefore, the first hypothesis of this study is:
H1: Capital structure has a significant and positive effect towards profitability.

Liquidity: Liquidity is a company's capacity to met financial commitments, which must be fulfilled immediately. Liquidity plays a significant role in assessing a company's efficacy, and therefore, a company must maintain a sufficient liquidity ratio in order to meet its short-term liabilities, because liquidity affects

the trust of the public. Alagathurai (2013) has proven the significant and positive relationship between liquidity and profitability in commercial companies registered in the stock market in Sri Lanka for 5 years, from 2008-2012. Zygmunt (2013) also explained the important role of the liquidity ratio on the performance of a company, having shown the positive and significant effect of the liquidity ratio towards the profitability of companies in Poland registered in information technology. The more liquid a company is, therefore the quality of the company's finance is better, and therefore has a positive effect towards the ability of a company in generating revenue. This is a logical assumption for the positive relationship between liquidity and profitability. Therefore, the second hypothesis of this study is:
H2: Liquidity has a significant and positive effect towards profitability.

Company Size: Company size can generally be defined as the comparison of size of an object, or a company size is one of the comparisons of the size of an organization or company. Therefore, company size can measure or determine the value of company size. The more assets a company has, the larger the revenue that can be generated, since assets are used by companies for operational activities with the objective of obtaining revenue. In a study on profitability in Sri Lankan hotels and travel sector companies in the period 2008-2012, Sritharan (2016) explained that company size positively effects profitability. When the company size on assets increases, the operations of the company as well as its profitability will also increase. This is a logical assumption for the positive relationship between company size and profitability. Therefore, the third hypothesis of this study is:
H3: Company size has a significant and positive effect towards profitability.

Leverage: Leverage as a control variable. The leverage ratio is used to measure the proportion of the company that uses debt to collect funds (Brigham & Houston, 2007). In other words, the company uses more of its debt to collect funding for business activities, compared to using its own capital. The higher the ratio of debt on equity, the lower the profitability (Ulzanah & Murtaqi, 2015).

3. Research Methodology

A sample is part of the amount and characteristics possessed by the population. The samples were chosen related to the profitability generated by the company, and can provide the required information. The samples taken in this study are SOEs that are registered in the Indonesian SOE website, which totals to 68 companies, with criteria that the companies have been audited for the 2016-2018 period. The reasoning behind the usage of SOEs as samples in this study is to fully represent issues related to profitability in SOEs. This is because not all SOEs have a good profitability rate, which indicates that the company is not in good health.

Table 1: Study Sample Criteria

Criteria	Number of Companies
State-Owned Enterprises	115
Incomplete publication of financial reports	50
Amount of companies	65
Period of study	3
Amount of study samples	195
Outlier	(27)
Amount of study samples after outliers	168

The dependent variable used in this study is profitability. This study uses the profitability ratio measured using return of equity (ROE), which was used by Rajakumaran and Yogendrarajah (2015). The independent variables used in this study are capital structure, liquidity, and company size. Capital structure ratio measured with the debt ratio (DR), which was used in a previous study by Rajakumaran and Yogendrarajah (2015). Liquidity ratio measured by the current ratio (CR), which was used in a previous study by Ahmad (2016). Company size used the natural logarithm from the total assets (SIZE) of the company as the measurement of company size, as was used in a previous study by Kartikasari and Merianti (2016). This study uses the leverage ratio as the control variable, the leverage ratio is the ratio used to evaluate debt and equity by comparing debt and equity, as was done in a previous study by Ulzana and Murtaqi (2015).

4. Empirical Findings and Discussion

Descriptive Analysis: Table 2 represents the calculation and the descriptive statistical data processing result for each variable in the study.

Profitability: The average value (mean) of profitability (ROE) is 0.11 with a standard deviation of 0.078, which shows that the average (mean) is larger than the standard deviation, with 0.11 > 0.078, which means that profitability has a high distribution and fluctuation. The SOE with the highest profitability is PT Telekomunikasi Indonesia in 2017, with a maximum value of 0.29 or revenue of 29% of the total equity of the company in that period. Meanwhile, the SOE with the lowest profitability rate is PT Krakatau Steel in 2018, with a minimum value of -0.10 or 10% of its revenue is negative out of its equity. This result shows that PT Telekomunikasi Indonesia in 2017 had a much better profitability compare to PT Krakatau Steel in 201, which had a sub-zero profitability, which means that for every 1.000 Rupiah from the shareholder's equity, PT Telekomunikasi Indonesia in 2017 was able to manage it to generate a profit of 290 Rupiah. Meanwhile, PT Krakatau Steel in 2018 had a negative profitability, which means that every 1.000 Rupiah from the shareholder's equity, PT Krakatau Steel in 2018 experienced a revenue loss of 100 Rupiah. Collectively, the return on equity value in the SOEs studied in this research had an average value of 0.1081, which means that for every 1.000 Rupiah from shareholder's equity, SOEs were able to manage it to generate 108 Rupiah revenue.

Capital Structure: The average value (mean) of capital structure (DR) is 0.51 with a standard deviation of 0.021, which shows that the average (mean) is larger than the standard deviation, with 0.51 > 0.021, which means that capital structure (DR) has a high distribution and fluctuation. The SOE with the highest capital structure (DR) is PT Bank Rakyat Indonesia in 2018, with a maximum value of 0.86. Meanwhile, the SOE with the lowest capital structure (DR) rate is PT Biofarma in 2016, with a minimum value of 0.10. The two companies with the maximum and minimum value in this study have a good ratio of debt towards total assets, due to the fact that PT Biofarma in 2016 had a debt to total asset ratio of less than 0,5, which means that 90% of the company's assets can be financed by the company through equity. Meanwhile, PT BRI in 2018 had a relatively high debt ratio of 0.86, which means that 86% of the company's assets are financed through debt. This is reasonable, due to the fact that debt in the banking sector originates from cash or investments placed by clients towards the bank in the form of savings, in which the savings are liabilities for the bank and that savings in any form are considered as assets in banking companies. Collectively, the value of debt to total asset ratio in SOEs studied in this research has an average value of 0.51, which means that majority (51%) of the assets of SOEs are financed through liabilities.

Liquidity: The average value (mean) of liquidity is 1.81 with a standard deviation of 0.973, which shows that the average (mean) is larger than the standard deviation, with 1.81 > 0.973, which means that liquidity has a high distribution and fluctuation. The SOE with the highest liquidity is PT Pelabuhan Indonesia II in 2016, with a maximum value of 5.95. Meanwhile, the SOE with the lowest liquidity is PT Hotel Indonesia Natour in 2016, with a minimum value of 0.38. The higher the current ratio, the higher the liquidity of a company. The result of the current ratio at present accepts the value of 2, and a current ratio of less than 1 shows that PT Hotel Indonesia Natour (Persero) in 2016 experienced difficulties in fulfilling its current liabilities. However, although PT Pelabuhan Indonesia II in 2016 had a current ratio of 5.95 (>2), it may not show that the company has good finances, since it is possible that the company does not allocate its current assets in effectively managing its capital. Collectively, the value of current ratio in the SOEs studied in this research, has an average value of 1.81, which means that the majority of the SOEs have good liquidity (CR>1), although not satisfactory enough since the average value is still below 2.

Company Size: The average value (mean) of company size is 30.03 with a standard deviation of 2.134, which shows that the average (mean) is larger than the standard deviation, with 30.03 > 2.134, which means that company size has a high distribution and fluctuation. The SOE with the highest company size ratio is PT Perusahaan Listrik Negara in 2018, with a maximum value of 34.94. Meanwhile, the SOE with the lowest liquidity is PT Indra Karya in 2017, with a minimum value of 25.78. This result shows that PT Perusahaan Listrik Negara in 2018 had the largest assets or resources among all of the SOEs studied in this research. Meanwhile, the SOE with the smallest company size ratio is PT Indra Karya in 2017 with a minimum value of

25.78. This shows that PT Indra Karya in 2017 is the company with the lowest asset value among all of the SOEs studied in this research.

Leverage: The average value (mean) of leverage (DER) is 1.54 with a standard deviation of 1.405, which shows that the average (mean) is larger than the standard deviation, with 1.54 > 1.405, which means that the leverage variable (DER) has a high distribution and fluctuation. The SOE with the highest debt to equity ratio is PT Bank Negara Indonesia in 2018, with a maximum value of 6.08. Meanwhile, the SOE with the lowest debt to equity ratio is PT Biofarma in 2016, with a minimum value of 0.12. Generally, the debt to equity ratio that can be tolerated ranges from 1.5 until 2. The debt to equity ratio of PT Biofarma of 0.12, which is under 1, indicates that PT Biofarma has a lower rate of debt compared to the company's equity. This can become a recommendation for investors to purchase shares in PT Biofarma.

Table 2: Descriptive Statistics

Variables	N	Min	Max	Mean	Std. Deviation
ROE	168	-,10	,29	,10	,078
DR	168	,10	,86	,51	,021
CR	168	,38	5,95	1,81	,973
SIZE	168	25,78	34,94	30,03	2,134
DER	168	,12	6,08	1,54	1,405
Valid N (listwise)	168				

The value of the determinant coefficient (R2) shows how much the variance percentage of the independent variables used in the research model is able to explain the variance of the dependent variable. The following is the result from the determinant coefficient testing between the variables of capital structure, liquidity, and company size, towards the profitability variable, before and after the leverage variable was inputted as a control variable. Table 3 explains that the R square before the input of the control variable into the study Is 0.071, which means that the independent variables in this study can only explain the profitability variable for 7.1%. After the variable control was input in the study, the R Square increased to 0.101. Therefore, it can be concluded that the ability of the independent variables, which are capital structure, liquidity, and company size, along with leverage as a control variable, is able to explain the profitability variable from 10.1%, and the remainder is explained by other variables.

Table 3: Determinant Coefficient (R2)

R	R Square	Std. Error of the Estimate
,267a	,071	,07598
,318b	,101	,07498

Table 4 shows the analysis result of double linear regression. The objective is to use the values of the independent variables to predict the value of the dependent variable. This study was conducted in order to identify the direction of the relationship of the variables of capital structure, liquidity, and company size, towards the profitability variable, which is controlled by leverage as a control variable.

Table 4: Double Linear Regression Analysis

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	,255	,092		2,773	,006
Debt_Ratio	-,063	,062	-,166	-1,014	,312
Current_Ratio	,017	,007	,208	2,424	,016
Size	-,006	,003	-,161	-2,033	,044
Debt_to_Equity_Ratio	,020	,009	,363	2,330	,021

Table 5 summarizes the result of hypothesis testing in this study using the partial regression analysis (t-Test) between the variables of capital structure, liquidity, and company size, towards the profitability variable, with leverage as the control variable. The regression equation shows that the X1 variable (Debt Ratio) and X3 (SIZE) has a negative effect, and the X2 variable (Current Ratio) has a positive effect, towards variable Y (Profitability), with the leverage variable (DER) as the control variable. The regression equation also proves that all independent variables in this study collectively have a positive effect towards profitability. The normality test shows that the data in this study are normally distributed. Aside from that, the regression model is also free of multicollinearity, heteroscedasticity, and autocorrelation.

Table 5: Summary of Hypothesis Testing Result

	Hypothesis	Result
H1	Capital structure has a positive and significant effect towards profitability	Rejected
H2	Liquidity has a positive and significant effect towards profitability	Accepted
H3	Company size has a positive and significant effect towards profitability	Rejected

In Table 4, the partial regression test results show that capital structure, measured using the debt to total asset ratio (DR), and has a negative and insignificant effect. Based on the $t_{calculated}$ value for the capital structure variable of -0.142 which is negative (-1.014 < 1.97462), and also the significance value of 0.312 (0.312 > 0.05), it can be concluded that capital structure, measured using the debt to total asset ratio (DR), has a negative and insignificant effect towards *return on equity* (ROE). The first hypothesis is rejected. Although the result of this study is negative and insignificant, this result is in line with previous research conducted by Rajakumaran and Yogendrarajah (2015), which showed that 44% of the total assets of trade companies in Sri Lanka, is represented by debt, and based on the correlation analysis, the debt to total asset ratio (DR) has a negative correlation with return on equity (ROE). The result of this study is not in line with the study conducted by Salawu (2007), which stated that there is a positive effect between capital structure, measured using short-term liabilities, and profitability. The result of this study also differs from the study conducted by Al-Ajlouni and Shawer (2013), which stated that there is a positive and significant relationship between debt ratio (DR) and *return on equity* (ROE), in petrochemical companies in Saudi Arabia in the 2008-2011 period.

This difference in result is caused by the difference in the object and period of study. The partial regression test results show that liquidity (CR), has a positive and significant effect towards profitability. Based on the $t_{calculated}$ value for the liquidity variable of 2.424 which is positive (2.424 > 1.97462), and the significance value of 0.016(0.016 < 0.05), it can be concluded that liquidity, measured using current ratio (CR), has a positive and significant effect towards *return on equity* (ROE). The second hypothesis is accepted. The result of this study is in line with previous research conducted by Ahmad (2016), which studied the profitability and liquidity in the banking sector in Pakistan, which stated that there is a positive relationship between liquidity and profitability. The result of this study is also in line with previous research conducted by Alagathurai (2013), which proved the positive and significant relationship between liquidity and profitability in commercial companies registered in the Sri Lankan stock market from 2008 until 2012, and supports the study conducted by Zygmunt (2013), which stated the positive and significant effect of liquidity ratio towards profitability in companies in Poland that are registered in information technology.

The results show that company size, measured using natural logarithm of total assets (SIZE) has a negative and significant effect towards profitability. Based on the $t_{calculated}$ value for the company size variable of -2.033 which is negative (-2.033 < 1.97462), and the significance value of 0.044 (0.944 > 0.05), it can be concluded that company size, measured using natural logarithm of total assets (SIZE), has a negative and significant effect towards *return on equity* (ROE). The third hypothesis is rejected. The result of this study supports previous research conducted by Abeyrathna and Priyadarshana (2019), which conducted research towards 20 manufacturing companies in Colombo, whose results show that the value of company size on total assets has a negative and significant effect towards profitability. However, the result of this study is not in line with previous research conducted by Sritharan (2016), which stated that company size has a positive effect towards profitability, in hotel and travel sector companies in Sri Lanka in the 2008-2012 period. This study is also not in line with previous research conducted by John and Adebayo (2013), which stated that there is a positive effect between company sizes towards profitability, in manufacturing companies in Nigeria for the 2005-2012 period. This difference in result is caused by the difference in the object and period of study.

5. Conclusion and Recommendations

This study empirically investigates the relationship between capital structure (DR), liquidity (CR), and company size (SIZE), towards profitability (ROE), with leverage (DER) as the control variable. This study used 68 State-Owned Enterprises in the years 2016-2018. After research and hypothesis testing, the researcher concludes several results from the hypothesis testing. The result of the first hypothesis proved that capital structure, measured using the debt to total assets ratio (DR), and has a negative and insignificant effect towards profitability. The researcher concluded that companies with a high debt to total asset ratio (DR) will decrease the profitability of a company. Inversely, the decrease of debt to total asset ratio (DR) will increase profitability. Although every industry has different evaluations to determine their capital structure, the researcher concludes that if the debt to total assets ratio (DR) is high, then the ability of the company in generating revenue will experience a decrease. The result of the second hypothesis proved that liquidity, measured using the current ratio (CR), has a positive and significant effect towards profitability. This means that if the current ratio (CR) experiences an increase, then the profitability of the company will also increase.

Although there were several companies in this study whose profitability experienced a decrease when the current ratio (CR) increased, the researcher concludes that as a whole, the data of SOEs in this study, shows that if the current ratio (CR) experiences an increase, therefore the profitability of the company will also increase. Furthermore, if the current ratio (CR) of a company is too low, or experiences a decrease, then the profitability will also decrease. The result of the third hypothesis proved that company size has a negative and significant effect towards profitability. This means that if the company size increases, then the profitability of the company will experience a decrease. Although there were several companies in this study whose profitability experienced a decrease when the company size increased, the researcher concludes that, the data of SOEs in this study, shows that if the natural logarithm of the company's total assets (SIZE) experiences an increase, therefore the profitability of the company will experience a decrease. This study is not without limitations that were experienced. One of the limitations is that the data used by the researcher was not complete due to the limited number of samples that the researcher was able to reach.

This is due to time and financial constraints, since the researcher was only able to collect data from SOE websites, and was not able to gather data from SOEs that did not publish their financial reports. In relation to the conclusion of this study, the researcher provides several recommendations for the next researcher who will study the same subject in this study, in hopes to give benefit. SOEs are advised to be wiser in choosing a suitable capital structure for its company, and must also focus on its company's ability in paying off current debts on current assets that they possess. Companies must be able to increase their liquidity rate in order to put the company in a good financial condition. SOEs must also be cautious when experiencing an increase in total assets, since the ability of the company in generating revenue will not be maximum otherwise. The next researcher is expected to be able to use samples from all SOEs and use a longer observation period in order to be able to generalize the profitability rate of a company. Aside from that, the next researcher is also expected to add other factors as independent variables, in hopes to be able to explain, predict, and study the profitability variable.

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Journal of Economics and Behavioral Studies (JEBS)
Vol. 12, No. 4, August 2020 (ISSN 2220-6140)

The Implementation of Accrual Basis Accounting in Indonesian Local Government

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Abstract: This study is based on the Government Regulation No 71 of 2010 concerning Government Accounting Standards which have been enacted since 2015. In the period of this regulation enactment, there are obstacles that occur and it causes culpabilities in accrual basis accounting reporting. The objective of this study is to discover the factors which affect the accrual basis accounting implementation. Utilizing institutional theory as the theoretical basis to establish the framework that correlate training, communication, educational background, organizational culture, and implementation of accrual basis accounting. This study was conducted using quantitative method in local government of Bekasi. Therefore, this study contributes to regional government in order to able to provide the input in implementing a policy, specifically the Government Accounting Standards; provide information in regard to the obstacles and solutions which affects the implementation accrual basis accounting in Regional Government; and be able to evolve and intensify the application of public sector governance, and also can be function as a suggestion for the public in creating policies and to ensure the fully-implementation in Regional Government.

Keywords: *Training, Communication, Educational Background, Organizational Culture, and Implementation of Accrual Basis Accounting.*

1. Introduction

The implementation of accrual basis recording is a transformation that happened in public sector which is indicated by the publication of New Public Management (NPM). NPM is a term that is used in general classification and it is similar to the public sector reform. NPM demands the management of state finances to be more transparent, accountable and be obtained to reveal the relevant information that worthwhile in decision and liability making. This requirement is in line with the advantage of accrual basis accounting implementation. Accrual system is one of NPM product and its implementation is regulated in Government Accounting Standards (GAS). GAS is the principles of accounting that are implemented in compiling and presenting the Government Financial statements. Accrual accounting reform in Indonesia is indicated by the publication of Law of The Republic of Indonesia No. 17 of 2003 on State Finances; and No. 1 of 2004 concerning State Treasury; Government Regulation Number 71 of 2010 concerning GAS; Regulation of the Minister of Home Affairs 64 of 2013 regarding the Implementations of Accrual Based GAS in Regional Governmental (Aswar, 2019). Generally, accrual accounting and reporting have been accepted by countries internationally. In Adhikari & Gårseth-Nesbakk, 2016) this matter is believing that the advantage of accrual accounting and reporting to various levels and at various levels, that is central government, state and regional governments and social assurance funds. Based on data of Price Waterhouse Cooper (PWC) Annual Report (2015), each of continents in world has implemented accrual accounting even though the continent which has 100% implementation is only in Oceania.

At the beginning of the implementation of the accrual system in Indonesia, there was many obstacles occurred. Based on data from the Outline of Inspection Results in First Semester of 2016 and outline of Inspection Results in First Semester of 2018, it indicates that there are transactions which are still presented on a cash basis. According to the 2015-2019 National Medium-Term Development Plan (RPJMN), accrual-based implementation in Indonesia is 24 provinces and 300 districts / cities. In the financial statements of 2015, the average score of Regional Government which have implemented Accrual Based Government Accounting Standards was 69.55 (Leksono & Haryanto, 2017). One of many factors that become the obstacles of accrual accounting implementations is the lack of human resources' capabilities. In order to minimize those obstacle, then trainings towards human resources are required to hold, good communication, excellent educational background, and organizational culture (Ouda, 2008). As the result, qualified and competent human resources will be available to compile and present the accrual-based Government Financial Reports. Furthermore, Aswar and Ermawati (2019) states that there is precondition on the accrual accounting implementation in Indonesia which is work experience, academic qualification. Fadelelmoula (2018) stated that an organization which adopts a system has to observe the training factor, because training program give effect on system implementation. Some researchers find out that training have advantage in enhance end-user skills for organizational efforts.

In achieving managerial and performance goals (Ram, Corkindale, & Wu, 2013), Aswar and Saidin (2018) discovers that there is a positive relation between training and accrual accounting system adoption. This matter is also in line with the argument of Aswar and Saidin (2018b) that is training effects on the accounting accrual implementation. One of the factors causing the failure in a system implementation is the existence of gap in communication (Al-Mashari & Al-Mudimigh, 2003; Abouzahra, 2011). Almajed & Mayhew (2013) stated that communication is one of the key factors in the successful implementation of a system. Coordinated communication is an efficient method to define goals, schedules, benefits, and population, and regular advisory to adequacy levels which are really important (Dezdar, 2012). Human Capital theory explain that education imparts knowledge, skills and values to people so therefore they can intense their learning capacity and productivity. Organizational culture includes terms such as values, traditions, policies, business principle, beliefs and confidence of employee about the business system.

Gray (2006) indicated that education also influences the ability to comprehend (including competence of, acquisition, assimilation, transformation and exploitation) and updated knowledge. Eriotis, Stamatiadis and Vasiliou (2012) revealed that clinical educational background will be more depend on formal forms of management and hierarchy so it will be more motivated to adopt the accrual accounting system and reap the expected benefit. Organizational culture can determine whether an implementation of a system can be works or not. Annamalai and Ramayah (2013) declared that organizational cultures are having implication in the system implementation. Aswar and Saidin, (2018) was using moderation variable to measure the relation between the support of top management level, training, and the quality of IT toward the adoption of accrual accounting. This study was conducted with the aim of finding out the relation of training, communication, educational background, organizational culture, and the accrual accounting implementation.

2. Literature Review and Hypothesis Development

Institutional Theory and Its Relevance to Legitimizing Accrual Accounting Implementation: Often the spread of accrual-based accounting is often linked to institutional theory in the public sector organization (Modell, 2009, 2013; Jacobs, 2012). This theory has allowed to clarify many important issues related to the reform of the public sector accountants; including development partners, the role of foreign organizations and the distribution of ideas and similar variations results (Ahn et al., 2014; Pollanen & Loiselle-Lapointe, 2012; Oulasvirta, 2014). In organizational practice, institutional theory examines the effect between persons, culture and the state, and exposes aspects that are incompativle with the 'formal organizations account' (DiMaggio, 1991). Organizations are considered reasonable actors with minimal options, financial, economic, political and structural factors provide the basis to legitimize and promote organizational practices (DiMaggio & Powell, 1983). Accounting as an organizational practice is embedded in institutional and social context in which it operates (Hopwood, 2000), and thus, the factors affecting and legitimizing the accrual accounting implementation in Indonesian public sector can be identified by using institutional theory.

Using organization as the unit of analysis, institutional theory reveals dissemination at local level (DiMaggio, 1991), the types of economic behavior arise among organizational and how the common roots of internal organizational influence actors to act in some way (Mbelwa, 2015; Scapens, 2006). The institutional theory can be analyzed by an analytical perspective from three logical perspectives which is memetic, coercive, and normative. Coercive isomorphism', is the product of formal and informal pressure exerted by other organizations on organizations depending on the financial resources and cultural aspirations of the individuals embedded in the organization (DiMaggio & Powell, 1983). Meanwhile, Coercive isomorphism is creating new organizational practices that are rationalised by reference to ritual homogeneity and conformity with other institutions. One of the coercive isomorphism mechanisms is regulatory change by dominating institutions, which often requires that followers change their shape and structure. Jorge et al. (2007) conducted study in public accounting reforms in Portuguese; he argues that the application of accrual accounting has changed local standards and institutionalized new accounting practices.

The Impact of Training towards Accrual Basis Accounting Implementation: Training gives learners knowledge and skills which are needed for their current occupation (Mondy, 2008). This is in line with the institutional normative isomorphism theory. That training is learning and improving individual abilities of individuals to carry out professional demands. Previous study found that there are impacts between training towards accrual accounting implementation (Dianto, & Aswar, 2020; Aswar & Saidin, 2018; Dezdar, 2012; Kusuma & Fuad, 2013 and Almajed & Mayhew, 2013). Based on those descriptions, the hypothesis that can be formulated is:
H1: Training has a significant impact towards accrual basis accounting implementation.

Impact of Communication towards Accrual Basis Accounting Implementation: Communication is a process to share information between two or more individuals. The effective communication can provide progress and will affect the implementations of accrual accounting. On institutional theory, communication is important for the effectiveness of groups or organizations and improving employee quality. In accordance with the institutional theory which stated that is communication encouragement will intensify people to communicate between their organizational scope, so that accrual basis accounting implementation run well, as normative isomorphism. Some studies represent a positive relation between communication and accrual accounting implementation, and the level of communication in socialize and applying government accounting standard in line with the level of accrual-based GAS in the related region (Aswar & Saidin, 2018b; Dezdar, 2012 and Almajed & Mayhew, 2013). Regarding those elucidations, the hypothesis that can be formulated is:
H2: Communication has a significant impact towards accrual basis accounting implementation.

Impact of Educational Background towards Accrual Basis Accounting Implementation: Education imparts knowledge and skills to the individual so it intensifies the learning capacity and productivity. Gray (2006) shows that education also influences the ability to absorb (including the ability to acquire, simulate, transform and exploit) and new knowledge. According to the institutional normative isomorphism theory, educational background has a role in individual skills to absorb, comprehend and apply a policy or procedure in an organization; in this case it is accrual basis accounting implementation. Referring those descriptions, the hypothesis that can be formulated is:
H3: Educational background has a significant impact towards accrual basis accounting implementation.

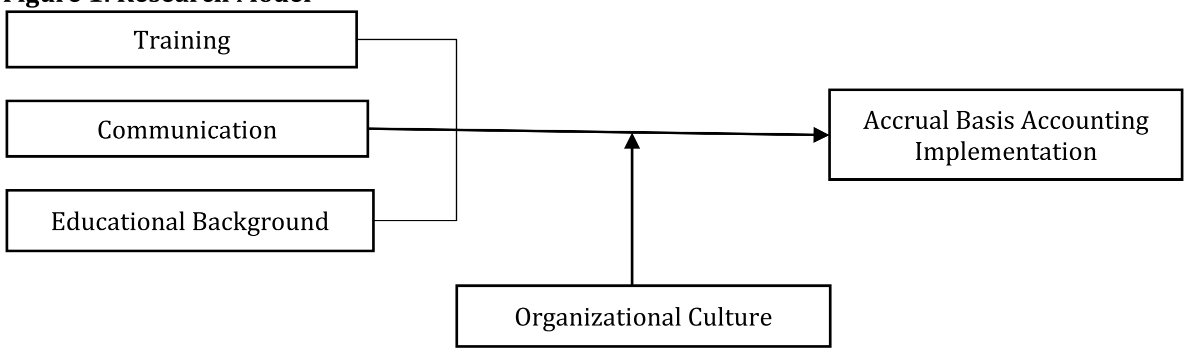
Organizational Culture Moderates the Impact of Training towards Accrual Basis Accounting Implementation: Organizational culture is a perception of practices or values that encourage the organization to strive goals. While its practices, organization often goes through obstacles wherein the lack quality of human resources' capabilities that are available. Organizational culture encourages and emphasize that human resources can improve their quality and skills. Organization that embraces such a culture, then human resources are encouraged to be able to comply and carry out the training to support the achievement of objectives. Therefore, training can provide benefits and achieved objectives; in this case it is accrual basis accounting implementation. This case is in accordance with institutional normative isomorphism theory regarding professional abilities that can improve the process of accrual basis accounting system implementation in regional government. Regarding those commentaries, the hypothesis that can be formulated is:
H4: Organizational culture moderates the impact of training towards accrual basis accounting implementation.

Organizational Culture Moderates the Impact of Communication towards Accrual Basis Accounting Implementation: Organizational culture implementation is related to a good and maintained level of communication. In order to achieve the goals, communications between individuals in organization are needed. Regarding institutional theory, the implementation of a proper communication can improve the individual quality; in this context is normative isomorphism. Implementation of organizational communication culture can intensify the recent system implementation. Referring those elucidations, the hypothesis that can be formulated is:
H5: Organizational culture moderates the impact of communication towards accrual basis accounting implementation.

Organizational Culture Moderates the Impact of Educational Background towards Accrual Basis Accounting Implementation: Organizational culture also often associated with a good teamwork system. The existence of organizational culture, it can assist certain parties/individuals that have a lower background or who are not appropriate to the related scope of work become more ingenious. It is in accordance with institutional normative isomorphism theory that is based on professional demands. So that organizational culture in the matter of team work can assist individual who lack in comprehension, in this context is to assist individuals in accrual basis accounting implementation. Based on those descriptions, the hypothesis that can be formulated is:

H6: Organizational culture moderates the impact of educational background towards accrual basis accounting implementation.

Figure 1: Research Model



3. Proposed Method

This study recommends an appropriate method to verify the conceptual framework which is proposed for empirical studies where data can be collected from respondents. Population target in this study are Head of Finance Subdivision and Staff at Regional Government Organization of Bekasi City. The decision to pick Head of Finance Subdivision and Staff at Regional Government Organization of Bekasi City as population target in this study because they are the responsible parties in compiling and presenting the financial reports. Furthermore, sample was collected by using census sampling technique. In Table 1 figure out the distribution of 44 subdivisions in Regional Government Organization of Bekasi City.

Table 1: List of Local Government of Bekasi

Local Government Organization	Head of Planning Subdivision
Regional Committee	6
Local Agencies	21
Inspectorate	1
Sub-District	12
Regional Public Hospital	1
Civil Service Police Unit	1
Regional Secretariat	1
Regional Representative Council Secretariat	1
Total Head of Planning Subdivision	**44**

4. Conclusion

The objective of this study is to discover the relation of training, communication, educational background, organizational culture, and accrual accounting implementation in Indonesian local government. This study required to be done by considering that implementation of accrual basis accounting system in Indonesia is relatively new yet, and the discovery of obstacles that might be happened because of training, communication, educational background, and organizational culture. The findings of this study are expected to provide some inputs in implementing a policy especially Government Accounting Standard, provide information in regard to obstacles and solutions that affect accrual basis accounting system implementation in Regional Government, can develop and improve public sector governance and also can be worthy as a recommendation for the public in creating policy and assure full implementation in Regional Government.

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Investigating the Effects of Government Expenditure and Money Supply on Unemployment in Namibia

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Abstract: This paper examines how government expenditure and money supply affect unemployment in Namibia. It employs the ARDL and ECM estimation techniques to establish the underlying relationship for the period 1980-2018. The results support the hypothesis that government expenditure and money supply can be used to contain unemployment. Additionally, an evidence of both long and short-run causality from government expenditure and money supply to unemployment is found. Practical policy implications indicate that in order to effectively combat unemployment problem in Namibia, the study recommends that there is a need for policy makers to ensure that the goal of employment creation is mainstreamed in all relevant fiscal and monetary policies responses in the country. Moreover, there is also a need to identify and propose policies that can help to do away with the lack of effective policy interventions.

Keywords: *Namibia, Unemployment, Government Expenditure, Money Supply and Cointegration*.

1. Introduction

Economists still argue on the basic dilemma, whether expansionary government expenditure or money supply can enhance economic growth that translates into a low level of unemployment (Attamah, Anthony & Ukpere, 2015). A fiscal/monetary expansion in terms of government spending/money supply is presumed to play a role in the mitigation of unemployment as well as stabilising the economy. Countries that are facing downturns pursue a range of fiscal strategies such as expenditure on public work projects and tax cuts in order to stabilise their economies. The hypothesis that fiscal expansion would enhance employment creations is logical when it comes to economic literature and might have worked for many economies. However, an expansionary fiscal policy that is exclusive to employment creation could be redundant because policy makers' willingness to use fiscal policy to reduce unemployment is tempered by a high level of debt. Poorly targeted fiscal instrument may worsen deficit financing that is unresponsive to unemployment. On the other hand, if the tax incentives are used to enhance the investment climate and thereby increase employment. In this way, it would result in a better targeted fiscal response to address policy issues. However, Government expenditure alone may not be enough to curve unemployment especially in a case such as that of Namibia where unemployment is 33.4 per cent (Namibia Statistics Agency, 2018). Additionally, emerging countries use monetary policy variables in terms of money supply to target employment. The basis is that when interest is low, companies would borrow money to expand which then leads to job creation.

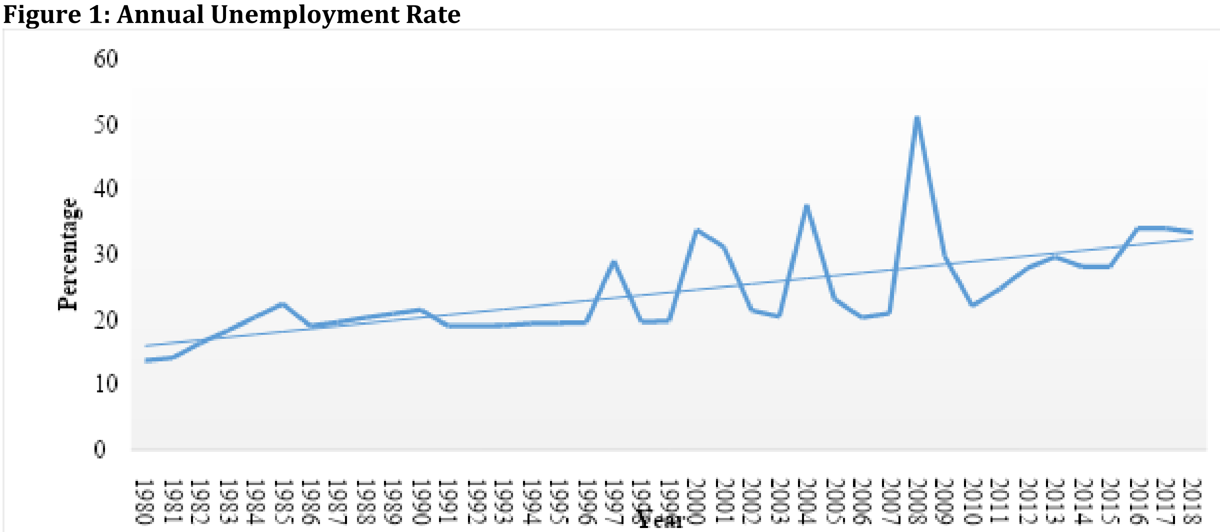
Empirical literature that addresses the effect of government expenditure and money supply on unemployment is very scanty in Africa. Attamah, Anthony and Ukpere (2015); Sunde (2015); Sunde & Akanbi, 2016 are among the few that examined how fiscal and/or monetary policy affects unemployment in African economies. Attamah, Anthony and Ukpere (2015) found supporting evidence that both fiscal and monetary policy exhibits positive effects on unemployment in Nigeria. This finding is consistent in both the short and long-run. Contrary to Attamah, Anthony and Ukpere (2015) findings, Sunde (2015) examined the effects on monetary policy on unemployment in Namibia and established that the monetary policy has an influence on unemployment only in the short-run but, ineffective in the long-run leading to mixed views in the literature. The recent rising trends of the unemployment rate in Namibia called for concern among policymakers (Sunde & Akanbi, 2016). Despite the huge government expenditure on sectors such as education, health, agricultural and infrastructure development, there has been a persistent decreasing level of employment in the country. In addition, the positive annual growth of broad money supply continued to be experienced with 9.5% and 4.9% for the periods 2017 and 2016 respectively (Bank of Namibia, 2017). In light of the above, the relevant question arising from such a scenario is to what extent fiscal and/or monetary expansion affects the rate of unemployment in Namibia?

Trend Analysis of Government Expenditure, Money Supply & Unemployment

Overview of Unemployment in Namibia: Unemployment in Namibia is defined based on international statistical standards. This view renders the classical predictions unrealistic. Hence, unlike the Classicalists, the Keynesians recommend fiscal policy measures in reducing unemployment (Wickens, 2008). By using strict definition, it is defined as, being without work, being available for work and actively seeking work. However, in the broader sense, unemployment is defined as "all persons within the economically active population or working age group who meet the following two criteria, irrespective of whether or not they are actively seeking work: being without work and being available for work" (Namibia Statistics Agency, 2016). Figure 1 below shows the trend in annual unemployment rates in Namibia. An upward trend was depicted in the unemployment rate over the period under review. The Namibian unemployment rate displayed modest fluctuations around an average level of 19 per cent during the 1980s and 1990s.

The 2008 global financial crisis and economic challenges such as drought which the country experienced in 2013 entailed higher unemployment rates than what was observed for the periods 1980s - 1990s. The effects of the global economic crisis triggered an increase in unemployment resulting from either closure of companies, downsizing and workers' retrenchments especially in the mining and fishing industries as a result of a decrease in international demand for the respective commodities (Mwinga, 2012). The unemployment rate in Namibia remains high. In 2018, Namibia reported an overall unemployment rate of 33.4%. In addition to this females recorded the highest unemployment rate of 34.3 per cent compared to their male counterparts who recorded a 32.5 per cent. Moreover, those who live in rural areas are more unemployment when compared to their urban counterparts with 33.5% and 33.4%, respectively (Namibia Statistics Agency, 2018).

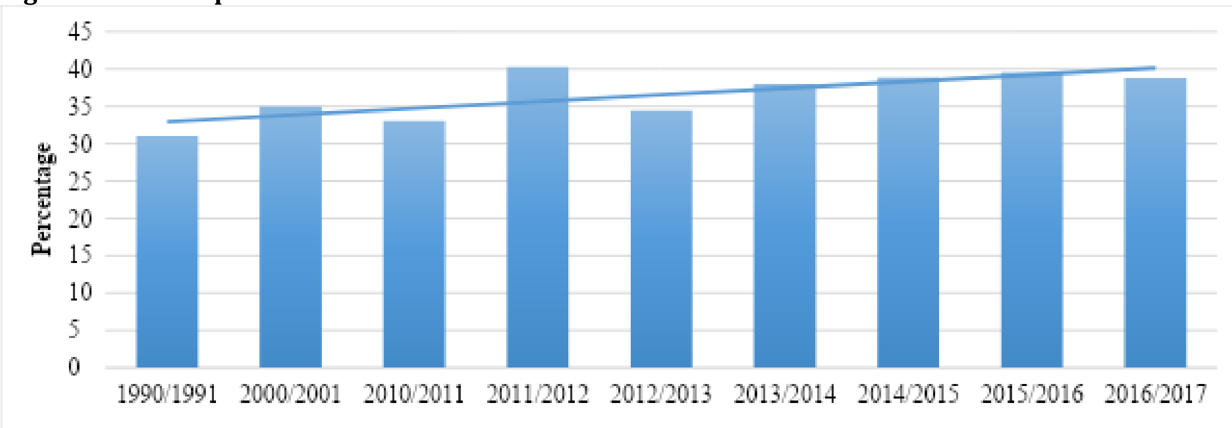
Figure 1: Annual Unemployment Rate



Source: Author's compilation

Overview of Government Expenditure in Namibia: The government expenditure in Namibia comprises two components namely, operational and developmental expenditure. Operational expenditure makes up over 80 per cent of the total budget with more than a third of that amount allocated to personal related expenditure. Development expenditure, on the other hand, favours the priority areas of the National Development Plan (NDP) of which about a third of the total capital expenditure is allocated to these sectors (Nakale, Sikanda, & Mabuku, 2015). Hayek believes that the use of monetary policy can be effective in times of extensive unemployment of all kinds throughout the economy. Since independence, Namibia has recorded a high growth in total expenditure with the 2000/01 financial year recording a 35 per cent total expenditure as a share of Gross Domestic Product (GDP). The share of total government expenditure to GDP increased from 34 per cent in the 2011/12 financial year to 40 per cent in the 2015/16 financial year. This increment was attributed to the demand-side oriented and counter cyclical fiscal measures (Bank of Namibia, 1991, 2001, 2011, 2017). Conversely, the country's labour market was stagnant and unresponsive to economic growth that they have experienced in recent years. The result was that fiscal policy became ineffective in enhancing the economy's production capacity to create employment opportunities thereby reducing unemployment.

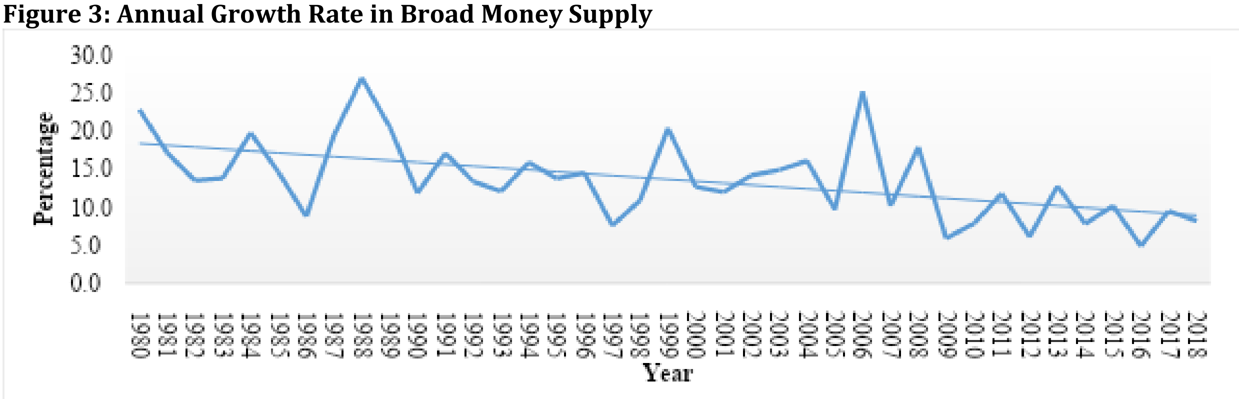
Figure 2: Total Expenditure as a Ratio of GDP



Source: Author's compilation

Overview of Broad Money Supply (M2) in Namibia: In the Namibian context, broad money supply (M2) comprises of narrow money plus other deposits. Other deposits translate as the "sum of currency outside depository corporations, transferable and other deposits in national currency of the resident sectors, excluding deposits of the central government and those of the depository corporations" (Bank of Namibia, 2017). Figure 3 depicts the evolution of broad money supply in Namibia from 1980 to 2018. It shows a downward trend, with higher spikes in 1988 and 2006 of above 25 A high growth of 25.2 per cent that was recorded in 2006 has from net foreign assets as the growth of domestic credit slowed. The lowest growth of 4.9 per cent in broad money supply recorded in 2016 was mainly attributed to a fall in net foreign assets and a weaker credit extension to the private sector (Bank of Namibia, 2016).

Figure 3: Annual Growth Rate in Broad Money Supply



Source: Author's compilation

2. Literature Review

Theoretical Literature: The concept of unemployment is perceived differently among economists. The classical economist's argument on the concept of unemployment is based on the Walrasian General Equilibrium Model (Sodipo & Ogunrinola, 2011). The Classicalist assumes full employment of labour. Moreover, they assumes that prices and wages are highly flexible which makes the economy to converge to full employment when there are disequilibrium's in the labour market (Humphrey, 1974). In the classicalist view, the general unemployment is impossible given that labour and other resources are always fully employed. However, in the event where any unemployment is experienced, it is assumed to be temporary. This indicated the market forces will always corrects itself toward equilibrium. Based on the above assumption the classicalist believes that unemployment is caused by government intervention, wrong calculations and inaccurate decisions by entrepreneurs as well as artificial resistance (Sodipo & Ogunrinola, 2011). The Keynesian economists, on the other hand, do not assume full employment of labour. They argue that the equilibrium can be realised at a level of output below full employment and at that level, part of the labour force remains unemployed. Keynesians believe that increasing the aggregate demand will restore full employment and not reduce the money wage as espoused by the classical views. The Keynesians premised their argument on the assumption that wages are flexible such that workers through their union could resist wage cuts.

The Hayek economists however, argue that targeting expansionary fiscal policy instruments to reduce unemployment may results in inflation such that monetary authority would have to increase money supply in order to keep the level of unemployment low (Sanz-Bas, 2011). Even though Hayek believed that there was a connection between expansionary monetary policies towards upholding full employment, he viewed the connection as indirect thereby not finding the conduct of monetary policy with central planning as such (Arevuo, 2012). Unlike the Keynesians, the monetarists believe that monetary policy is the most powerful instrument to stabilise the economy and has an influence on economic activity than fiscal policy (Dwivedi, 2005). They argue that the use of fiscal policy may trigger impermanent rise in output such that in the long run, an increase in government expenditure will only cause inflation and may not necessarily change the output. The monetarists are of the view that supply side policies are more effective to address unemployment when compared to demand side policies.

Empirical Literature: Among the reviewed empirical literature, Eita and Ashipala (2010) studied the determinants of unemployment between 1971 and 2007 in Namibia. Their study supports the hypothesis that national output and wages positively impact unemployment while inflation negatively affects unemployment. In a similar study, Sunde and Akanbi (2016) used the structural vector autoregressive (SVAR) method and cover the period 1980 to 2013. They found a combination of various shocks and hysteresis mechanism to be the cause of the persistently high unemployment in Namibia. In addition, it was established that labour supply, real wages and aggregate demand impact unemployment in the country. Furthermore, price shocks were found to be effective in the long-run whereas productivity was effective in the short as well as the long-run. Alexius and Holmlund (2007) analysed the effect of monetary policy on unemployment in Sweden by employing the SVAR model. Their findings revealed that 22 and 30 per cent of variations in Sweden unemployment are explained by monetary policy shocks. This indicates that there supporting evidence that monetary policy has significant influence on unemployment. It is important to note that their study only concentrated on one monetary policy variable, the real interest rate channel.

In the same line, Tagkalakis (2013) studied the effects of fiscal policy on unemployment in Greece. It was found that unemployment and growth was responsive to a decrease in government spending, consumption and investment. Furthermore an inverse relationship between taxes and unemployment as well as growth was found. The effectiveness of fiscal policy to stimulate output and unemployment was found to be more significant when considering recent year developments in the country. This is when compared to the pre-crisis years. In Namibia, Sunde (2015) explored how monetary policy affects unemployment over the period 1980 to 2013 by employing SVAR. The study used exchange and bank lending rates channels. There is supporting evidence that monetary policy is only effective in the short-run but ineffective in the long-run. On the contrary, other studies (Alexius and Holmlund, 2007); Jacobs, Kuper and Sterken, 2003) have supported both the short and the long-run hypothesis. As such, the inclusion of money supply and fiscal policy measures in this study will contribute to ambiguities in the existing literature.

In line with the above views, Attamah, Anthony and Ukpere (2015) used both fiscal and monetary policies variables to examine their effect on unemployment in Nigeria. They found that government expenditure, money supply and exchange rate exhibit a positive effect on unemployment. The findings are consisted with Etale and Ujuju (2016) who did the same study in Nigeria. This is with exception of the exchange rate channel, where an inverse relationship was reported. Sebuliba (2017) did a similar study for Uganda, using various estimation techniques. The use of the Fully Modified Least Squares (FMOLS) in the study found a negative relationship between total government expenditure and unemployment. However, the results of the Dynamic Least Squares (DOLS) found the relationship between fiscal variables and unemployment to be insignificant.

With regards to monetary policy, the results revealed that both interest rate and exchange rate have a negative effect on unemployment. On a broader view, Onodugo et al. (2017) used capital and recurrent expenditure to explore how the public sector expenditure affects unemployment in an emerging market. There is supporting evidence that capital expenditure has a positive effect on unemployment in medium to long-run while there reverse is true for the recurrent expenditure. Similar c results were also obtained by Nwosa (2014).

3. Methodology

The paper employs a quantitative research strategy to examine how fiscal and/or monetary policy can be used to address Namibia developmental agenda of employment creations. In this paper, an Autoregressive Distributed Lag (ARDL) model that was introduced by Pesaran, Shin and Smith (2001) is used examine the underlying objectives. The ARDL model is considered to be efficient in estimations that involve small sample size. The authors acknowledges lack of data in Namibia for the period before 1980 hence, the available small samples of data were used making the use of ARDL model to be appropriate. Moreover, the model allows testing for the existence of a relationship between variables in levels using a combination of variables I (1) and I (0) as regressors which is also the case in this study.

Econometric Framework and Modelling Specification: For purposes of estimating the econometric model, the study complied with the following steps: Unit roots test, bound test for cointegration, estimation of error correction model, diagnostic tests and Granger causality test. The presence of a unit root was determined using the Augmented Dickey-Fuller (ADF) and Phillips-Perrons (PP) tests. The general ADF expression is given by;

$$X_t = \alpha_t + \beta_t t + \rho X_{t-1} + \sum \delta \Delta X_{t-1} + \mu_t \quad (1)$$

Where: X_t denotes a time series variable, t represent the time t and μ_t denote a stochastic error term normally. The PP test on the other hand, includes fitting the regression. The PP test equation is as follows:

$$Y_t = Z_1 + \lambda y_{t-1} + Z_2 \left(t - \frac{T}{2}\right) + \sum_{i=0}^{n} \delta_i \Delta Y_{t-1} + \mu 2_t \quad (2)$$

Where: Y_t is the time series variable, T is the estimated sample size and $\mu 2_t$ denotes the covariance stationary disturbance error term Unit root test hypothesis are;

H_0: $\rho = 0$ (unit root)

H_1: $\rho \neq 0$ (no unit root)

The null hypothesis is rejected when the test statistics is less than the critical value with a significant aspects of 5 per cent thereby confirming the stationary alternative hypothesis (Byrne & Perman, 2007).

Thereafter, an ARDL equation is constructed in order to perform the bound F test in probing the existence of a cointegration property.

$$\Delta U_t = \alpha_0 + \sum_{i=1}^{p} \alpha_{1i} \Delta U_{t-i} + \sum_{i=1}^{q1} \alpha_{2i} \Delta GE_{t-i} + \sum_{i=1}^{q2} \alpha_{3i} \Delta M2_{t-i} + \sum_{i=1}^{q3} \alpha_{4i} \Delta I_{t-i} + \beta_1 U_{t-1} + \beta_2 GE_{t-1} + \beta_3 \Delta M2_{t-1} + \beta_4 I_{t-1} + \varepsilon_t \quad (3)$$

Where: α_0 denote the intercept term and the first difference operator is denoted by Δ. In equation 3 the order (p, q_1, q_2, q_3) represents lags as determined by various information criteria. These include; the Akaike's Information Criteria (AIC), Hannan-Quinn (HQ), Schwarz Information Criterion (SC), Final Prediction error (FPE) and Likelihood Ratio (LR). In order to test the cointegration property the computed F-statistic value is assessed against the critical values. This applies to both lower and upper bounds. When computed F-statistic falls below the lower bound, it's an indication that there is no co-integration. Similarly, the cointegration property is rejected when computed F-statistic exceeds the upper bound. Whereas inconclusive is said to occur when computed F-statistic falls between the lower and upper bounds. When the cointegration property is not supported, a short-run version of the ARDL (p, q_1, q_2, q_3) will be specified as:

$$\Delta U_t = \beta_0 + \sum_{i=1}^{p} \alpha_{1i} \Delta U_{t-i} + \sum_{i=1}^{q_1} \alpha_{2i} \Delta GE_{t-i} + \sum_{i=1}^{q_2} \alpha_{3i} \Delta M2_{t-i} + \sum_{i=1}^{q_3} \alpha_{4i} \Delta I_{t-i} + \varepsilon_t \quad (4)$$

However, when the cointegration property is supported, an error corrected version will be is specified. The Error Correction Model (ECM) encompasses both short and long -run dynamics. It captures the degree at which at which short-run shocks are corrected to equilibrium (Dağdeviren & Sohrabji, 2012). The specification of the ECM is expressed as;

$$\Delta U_t = \beta_0 + \sum_{i=1}^{p} \alpha_{1i}\Delta U_{t-i} + \sum_{i=1}^{q_1} \alpha_{2i}\Delta GE_{t-i} + \sum_{i=1}^{q_2} \alpha_{3i}\Delta M2_{t-i} + + \sum_{i=1}^{q_3} \alpha_{4i}\Delta I_{t-i} + \lambda_1 ECT_{t-1} + \varepsilon_t \quad (5)$$

Where: λ represent rate at which variable/s corrects to equilibrium while error correction term (ECT) is a stochastic residual term. The coefficient of the error correction term (λ) has to be negative which is an indication of convergence to equilibrium and also suggests cointegration relation. A divergence from equilibrium will occur when λ is positive coefficient of the ECT indicates a divergence from the equilibrium.

In addition, the ECM provides the opportunity to decompose the long and short-run causality issues.
The causality hypotheses are as follows:
H_{01}: Unemployment does not Granger cause Government Expenditure
H_{11}: Unemployment Granger causes Government Expenditure
H_{02}: Unemployment does not Granger causes Money Supply
H_{12}: Unemployment Granger causes Money Supply
H_{03}: Government expenditure does not Granger causes unemployment
H_{13}: Government expenditure Granger causes unemployment
H_{04}: Money Supply does not Granger cause unemployment
H_{14}: Money Supply Granger causes unemployment

Lastly, the diagnostic check was done by testing for robustness through employing various diagnostics tests of the residuals. The diagnostic tests that were performed include the: Breush-Godfrey, Breusch-Pagan-Godfrey test for autocorrelation and heteroskedasticity respectively. These results imply that the direction of causality from government expenditure and money supply. Additionally the Jargue-Bera and Ramsey RESET tests are used to examine the normality and the stability of the model. The a-priori expectations of the regressors are summarised in Table 1 below.

Table 1: Summary of the Expectations Signs

Variables	Expected Signs/Relationship	Rationale
Government Expenditure (GE)	Negative(-)	A negative relation is expected between Government spending and unemployment as s rise in public spending further increases aggregate demand which in turn leads to job creation thereby reducing unemployment levels. Hence, an inverse relationship between government expenditure and unemployment is expected. This explanation is consistent with the Keynesian theory of aggregate demand, which assumes that employment creation is derived from total aggregate demand (Schiller, 2006).
Money Supply (M2)	Negative(-)	Money supply is expected to exhibit an inverse relationship with unemployment. This is to the reasoning that an expansion in money supply is likely to reduce unemployment as a result of low interest rates and increased domestic investments (Mankiw & Taylor, 2007).
Inflation rate (I)	Negative(-)	According to the Phillips curve, inflation increases employment. Therefore, the reverse is true for unemployment (Jelilov, Obasa & Isik, 2016).

Source: Author's compilation

4. Empirical Results and Discussion

Unit Root Test: Prior to regression analysis, the paper examined the unit root property using the tests explained in the methodology section. The results are presented in Table 2. Both ADF and PP tests show that there is a mixture various order of integration. Some variables are integrated of order zero (I (0)) while inflation is integrated of and order one (I (1)). This underscores the relevance of the ARDL approach to examine the cointegration property.

Table 2: Stationarity Test Results

Variable	Model Specification	ADF		PP		Order Of Integration
		Levels	1st Diff.	Levels	1st Diff.	
U	Constant	-0.6188	-9.3925*	-3.3205*	-16.331*	
	Constant and Trend	-7.1237*	-9.2431*	-11.938*	-15.945*	I(0)
	None	1.9825	-8.6759*	0.5961	-12.069*	
GE	Constant	-5.2332*	-7.7290*	-5.0947*	-8.5514*	I(0)
	Constant and Trend	-4.7967**	-7.6096*	-4.7199*	-8.3572*	
	None	0.4546	-7.8534*	0.5173	-8.6799*	
M2	Constant	-3.1792**	-10.476*	-5.1425*	-27.116*	I(0)
	Constant and Trend	-6.5448*	-10.321*	-6.5723*	-26.319*	
	None	-1.2339	-10.585*	-1.6295***	-21.018*	
I	Constant	-2.3466	-8.0823*	-2.0808	-14.403*	I(1)
	Constant and Trend	-4.7072*	-7.9685*	-4.7008*	-14.226*	
	None	-1.3809	-8.1008*	-1.2501	-10.779*	

Source: Author's compilation, **Note** that *, **, ** * indicate significance at 1, 5 and 10%, respectively.

Cointegration Test: The bound test for cointegration results is presented in Table 3. It confirms the existence of the cointegration property, an indication that long-run relationship among the variables exist. Eita and Ashipala (2010); Sunde and Akanbi (2016) has similar findings. Given the above results, an ECM is therefore estimated.

Table 3: Bound Test Results

Dependent Variable	F-Statistics	K	Significance Level	Bound Critical Values	
				I(0)	I(1)
U	5.932270	3	10%	2.72	3.77
			5%	3.23	4.35
			1%	4.29	5.61

Source: Author's compilation

ARDL Model Results: Long-Run: The long-run estimates are presented in Table 3. The findings are consistent with theoretical expectations in terms of signs, they are however insignificant with exception of inflation. This result is consistent Sunde (2015) who found monetary policy in Namibia to not have an effect on unemployment in the long run. Inflation was hypothesis was also supported by Sunde (2015).

Table 4: Long-Run Coefficient Results

Dependent Variable U
ARDL(1,1,0,1)

Variables	Coefficient	Std. Error	t-Statistic	Prob.
GE	-0.0232	0.5345	-0.0435	0.9656
M2	-0.3666	0.2024	-1.8116	0.0797
I	-0.6740	0.2885	-2.3360	0.0261
C	36.1244	13.5843	2.6592	0.0123

ECM Results: The error correction estimates in Table 5 indicates that there exists an inverse relationship between government expenditure and money supply. This implies that fiscal or monetary policy instruments can be used stimulate the much needed employment in Namibia. Similar results were also found by Tagkalakis (2013) and Sebuliba (2017). An expansionary fiscal policy (increase in government expenditure) further increases aggregate demand which in turn leads to job creation thereby reducing unemployment levels. Hence, a negative link between government expenditure and unemployment. This explanation is based on the Keynesian theory of aggregate demand, which assumes that employment creation is derived from total aggregate demand (Schiller, 2006). Similarly, an expansionary monetary policy (an increase in money supply) makes borrowing cheaper and easier thereby allowing more economic activities to occur which then reduces unemployment (Mankiw & Taylor, 2007). The error correction term(ECT_{t-1}) captures the speed of adjustment at which unemployment converges to its equilibrium level. It shows that the speed of adjustment is relatively at -1.063, implying over 100% convergence rate. In this, the Durbin-Watson statistic of 1.992430 implies that there is not autocorrelation.

Table 5: ECM Results

Dependent Variable ΔU				
ARDL(1,1,0,1)				
Variables	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	0.5861	0.7707	0.7604	0.4531
ΔU(-1)	0.1631	0.1736	0.9396	0.3551
ΔGE	-1.8226	0.6122	-2.9769	0.0058
ΔGE(-1)	0.1525	0.4837	0.3153	0.7548
ΔM2	-0.2739	0.1384	-1.9789	0.0574
ΔI	0.0527	0.2920	0.1805	0.8580
ΔI(-1)	0.6936	0.3380	2.0517	0.0493
ECT(-1)	-1.0632	0.2310	-4.6024	0.0001
R^2	0.5966			
F-stat	6.1272			
Prob(F-stat)	0.0001			
Durbin-Watson	1.9924			

Source: Author's compilation

Data Sources and Measurements: To facilitate the analysis, the paper used time series annual data from 1980-2018. The selection of the period was due to availability of data. The data were obtained from the database of the Namibia Statistic Agency (NSA), Bank of Namibia (BoN), the database of Eita and Ashipala (2010), as well as that of Shifotoka (2015). However, when the cointegration property is supported, an error corrected version will be is specified. The Error Correction Model (ECM) encompasses both short and long - run dynamics. It captures the degree at which at which short-run shocks are corrected to equilibrium (Dağdeviren & Sohrabji, 2012). The dependent variable is measured as ratio of unemployed persons to the total labour force (U). The regressors are government expenditure (ratio of total government expenditure to GDP (GE)), growth of broad money supply (M2) and inflation rate (I) as a control variable added to the model.

Granger Causality Test: The causality results in Table 6 shows an evidence of both short and long-run unidirectional causality from Government expenditure to unemployment as well as from money supply to unemployment. These results imply that the direction of causality from government expenditure and money supply to unemployment have an important role in reducing unemployment in Namibia. This essentially means that the policymakers have to strengthen the effective use of fiscal/monetary policies in combating the high rate of unemployment in Namibia. In addition to the above, a joint causality hypothesis is also supported.

Table 6: Wald Test Results

Dependent Variables	**Short-Run Causality F-Statistic(p-value)**				**Long-Run Causality t-statistic (p- value)**	**Joint Causality F-statistic (p- value)**
	U	GE	M2	I		
U	-	4.5839 (0.0186)**	3.9162 (0.0574)***	2.1724 (0.1321)	-4.6025 (0.0001)**	6.3028 (0.0003)**
GE	1.2924 (0.2643)	-	6.6232 (0.0151)**	0.0033 (0.9543)	-2.5871 (0.0146)**	3.6032 (0.0159)**
M2	2.2004 (0.1289)	4.9973 (0.0137)**	-	1.1883 (0.2846)	-3.8857 (0.0005)**	6.5131 (0.0002)**

I	0.0329	0.1401	0.2072	-	-2.3978	1.9532
	(0.8573)	(0.7109)	(0.8140)		(0.0229)**	(0.1148)

Source: Author's Compilation

Diagnostic Tests: The diagnostic tests in Table 7 reveal that the data does not suffer from autocorrelation, heteroscedasticity and specification problems. Further to this, it show that the normally and stability assumptions are supported. Essentially, the diagnostic test results imply consistency of residuals, robustness and adequacy of the model.

Table 7: Diagnostic Test Results

Tests		
Breusch-Godfrey	F- Statistic (P-Value)	0.394 (0.54)
Breusch-Pagan-Godfrey	F- Statistic (P-Value)	1.609 (0.17)
Ramsey RESET Test	F- Statistic (P-Value)	4.288 (0.05)
Normality Test	Jarque Bera (P- Value)	1.269 (0.53)

Source: Author's Compilation

Figure 4(a): CUSUM

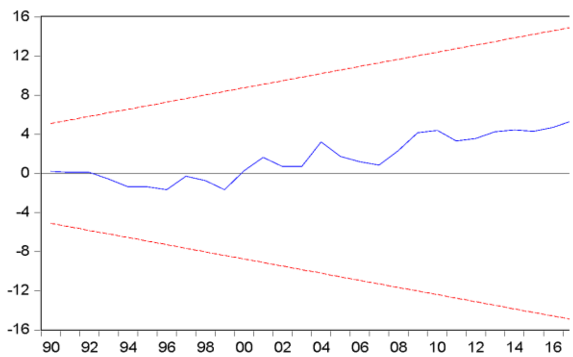
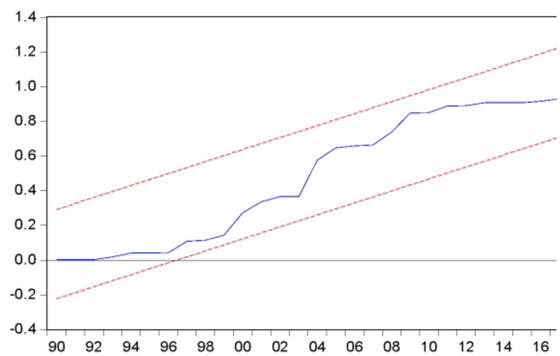


Figure 4(b): CUSUM of Square



5. Conclusion and Policy Implications

This paper examined the effect of government expenditure and money supply on unemployment in Namibia by using an error correction model. There is supporting evidence that cointegration and causality exists. Findings from the short-run model indicate that government expenditure and money supply relate negatively to unemployment and are both statistically significant. This means that a fiscal expansion (rise in government expenditure) will reduce the unemployment rate in Namibia. Similarly, an increase in money supply will lead to a rise in consumption and investment expenditure which ultimately increases the aggregate demand thereby reducing unemployment (Mankiw & Taylor, 2007). The causality results indicate evidence of a both long and short-run unidirectional causality from government expenditure to unemployment as well as money supply to unemployment. A joint causality was also confirmed. Policy implications resulting from the findings of the study are as follows.

Firstly, although the results established that both expansionary monetary and fiscal policy are effective in reducing unemployment in Namibia, the rate of unemployment continues to be high in the country. Therefore, there is need for policy makers to ensure that the goal of employment creation is mainstreamed in all relevant policies and development. Secondly, there is a need to identify and propose policies that can help do away with the lack of effective policy interventions. This is in line with Ka-Fu (2000), who argued that an increase in government expenditure that does not focus toward employment creation may not effectively address unemployment due to disruption by a high level of debt. In addition to this untargeted policy generally leads to deficit spending with minimal or no effect on unemployment. In light of this, the findings imply that effective demand-side policies are crucial to address unemployment in Namibia both in the short and long run. Thirdly, the analysis developed in this study may suffer from some shortcomings. Hence, future research may be considered by using a large sample size and disaggregated data to obtain a more comprehensive conclusion.

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Factors Affecting the Local Governments Financial Performance

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Abstract: This study aims to test and prove the relationship of local government financial performance with fiscal balance transfer, local own-source revenue, local government size, and capital expenditure. The study uses samples from District/City Local Governments in Sulawesi Island for the years 2016-2018. The samples were collected using the census sampling method, for a total of 243 samples in District/City Local Governments in Sulawesi Island. In this analysis, the hypothesis testing is performed using SPSS by the multiple linear regression method. The result of this study shows that fiscal balance transfer has a negative impact on the local government financial performance, local own-source revenue has an impact towards the local government financial performance, local government size does not have an effect towards the local government financial performance, and capital expenditure has an effect towards the local government financial performance. This study is expected to contribute to local governments by providing recommendations to improve the local government financial performance.

Keywords: *Fiscal balance transfer, Local own-source revenue, Local government size, Capital expenditure, financial performance.*

1. Introduction

Improvement of performance must be done, by both private and public organizations. The performance of private organizations differs from the public sector, in which majority of performance measurement is based on revenue, and the public sector does not use revenue as a measurement for the success of an organization, since its main objective is not to generate revenue, but to improve the welfare of the people, as well as public services. The performance of local governments can be viewed from a financial viewpoint, through financial, performance to determine the efficiency and effectivity in managing local finances (Putri & Aswar, 2020). According to Mardiasmo (2009), public sector performance can be measured using value for money, which consists of economy, efficiency, and effectivity. This study is not in line with Andani and Respati (2019), and consistent with study carried out by (Mulyani & Wibowo 2017). The examination of performance is aimed to assess the 3E aspects (economy, efficiency, and effectivity). The performance examination result report of the BPK concludes that performance is still not generally effective. In Districts/Cities in Sulawesi Island, the BPK implemented the following examinations related to performance examination in Districts/Cities from 6 provinces.

Table 1: Performance Examination

Entity	Number of Examinations	Examination Result
North Bolaang Mongondow District	1	Not Yet Effective
Minahasa District	1	Ineffective
North Minahasa District	1	Ineffective
Manado City	1	Not Yet Effective
Poso District	1	Not Yet Effective
Barru District	1	Not Yet Effective
Selayar Islands District	1	Not Yet Effective
Maros District	1	Ineffective
Soppeng District	1	Ineffective
Wakatobi District	1	Not Yet Effective
Mamasa District	1	Not Yet Effective
Gorontalo District	1	Not Yet Effective
Gorontalo City	1	Ineffective
Total	13	

Based on Table 1, which summarize the examination result for several Districts/Cities in the Sulawesi Island the BPK still states that performances are still not yet effective or ineffective. The performance of local governments are achievements of vision, mission, as well as the goal of activities listed in local planning document, which will later impact the welfare of the people, as well as improve the quality of public services. The government must improve financial performance in managing local finances. Previous studies have frequently discusses factors affecting the local government financial performance, such as the study Aminah et al. (2019) which states that fiscal balance transfer has an effect on the local governments financial performance, in which the higher the fiscal balance transfer, the more funds that are received to fund local government activities in promoting the welfare of the people, improving public services, and improve the local government's performance itself. The existence of funds from the central government may function to increase the influence of the central government in implementing closer monitoring towards the disclosure of public sector financial reports (Ingram & DeJong, 1987). Furthermore, the local government financial performance may be affected by local own-source revenue. Aswar (2019), and Apridiyanti (2019) found that local own-source revenue has an positive effect on the local governments financial performance, which is indicates that higher the independence of the region, and avoids funding dependence from the central government. Therefore, is able to use self-generated funds to increase the growth of the people and thus increases the local government performance.

Another factor that can affect the local government financial performance is local government size. Governments will display good news in order to obtain a higher performance score, based on the study conducted by Tama and Adi (2018). Local government size in this study is used based on previous research conducted by (Aswar, 2019). The research conducted by Mulyani and Wibowo (2017) states that local government size has an effect on the local government's financial performance. Capital expenditure is another factor that can affect the financial performance of local governments. Mulyani and Wibowo (2017) stated that capital expenditure has a positively significant on the local government's financial performance. The higher the allocation of capital expenditure, the better the local government financial performance. This is due to the fact that local expenditure is the expenditure of the government in order to provide services to the people, who will experience direct or indirect impact (Andirfa et al., 2016). Capital expenditure is made by the government for things such as infrastructure building, as well as other types of building (Ermawati & Aswar, 2020). Therefore, the aim of this study is to investigate the relationship between fiscal balance transfer, local own-source revenue, local government size, and capital expenditure towards the financial performance of local governments.

2. Literature Review and Hypothesis Development

Agency Theory: Harahap (2011) explains that the agency theory is a relationship between the management, owner, creditors, and the government. In the implementation of relationships between the investor and management of a business, agency relationships frequently occur, according to Jensen and Melking (1976). Furthermore, Sochib (2016) explains that the agency relationship is a contract that consists of one or more parties, called the principal, who employs another party, which is the agent, to accomplish several services, and afterwards delegates decision-making authority to the agent.

Signaling Theory: According to Spence (1973), the signaling theory is a theory in which the party of the information owner attempts to provide relevant information that can be utilized by the receiver of information. The receiving party then adjusts its behavior based on the understanding of the signal. In the context of signaling, the government attempts to provide a good signal for the people (Evans & Patton, 1987; Verawaty, 2017). The objective of this is so that the people will support the government, in order for the government to be able to be executed well, in which financial reports are one of the facilities in providing signals to the people (Verawaty, 2017).

Hypothesis and Conceptual Framework: The hypothesis development in this study is based on factors suspected to have effects towards levels of corruption, and is thus formulated as follows:

The Effect of Fiscal Balance Transfer Towards Local Government Financial Performance: Fiscal balance transfers are funds distributed by the central government to the regional governments that are used to

finance programs in the region, to achieve the goal of the local government, to attain the local government's goal of promoting people's welfare and enhancing the quality of public services. The central government acts as the principal in relation to the agency theory, and local g and the local government acts as the agent, in which the central government delegates authority to the local government in managing the finances from received funds, and the local government must assume responsibility on behalf of that authority by managing finances well, an also optimally and fairly increase the quality of public services. This will improve the local government's financial efficiency, based on studies conducted by Andirfa et al. (2016) and Awwaliyah et al. (2019), which show that fiscal balance transfer has a positive effect on the financial performance of local governments. The hypothesis is formulated on the basis of the explanation above:
H1: Fiscal Balance Transfer positively significant on the Local Governments Financial Performance.

The Effect of Local Own-Source Revenue Towards Local Government Financial Performance: Local own-source revenue is revenue retrieved from the region itself, based on regulations that apply, originating from local tax, local retribution, and other lawful revenue. In the context of the agency theory, the people act as the principal by providing funding for local retributions, and the local government acts as the agent, who executes responsibility in managing its funds, which originate from the people, to drive other activities in order to achieve the goal of the organization. Andrei (2013), Aswar (2019) and Awwaliyah et al. (2019) found that local own-source revenue positively significant on the local governments financial performance. Therefore, the hypothesis formulated:
H2: Local Own-Source Revenue positively significant on the Local Governments Financial Performance.

The Effect of Local Government Size Towards Local Government Financial Performance: Size of local government determines the size of the region. This is one of the recommendations from the study conducted by (Aswar, 2019). Local government size is viewed from the number of citizens, in which every district/city has a different number of citizens and budget. A higher number of citizens will trigger local governments to send signals or relevant information related to the prepared financial statements, in which a good financial report indicates that an organization is running well (Sukarmi & Budiasih, 2016), and therefore increases the local government financial performance itself. The local government's sending of signals to the people would encourage them to support the improvement of the local government's financial performance. A high amount of citizens will improve the local government performance (Mulyani & Wibowo, 2017). This is consistent with studies carried out by Dewata et al. (2017), and Anggraini et al. (2019) found that the size of local government has a positive significant impact on the financial performance of local governments.
H3: Local Government Size positively significant on the Local Governments Financial Performance.

The Effect of Capital Expenditure Towards Local Government Financial Performance: Capital expenditure is the expenditure for development, in the form of investment for a region, which has a benefit of more than one year, and can add to the assets or wealth of the region, such as the purchase of equipment, and construction of infrastructure, which will support people's health and boost the quality of public services later. Capital Expenditure must also be done effectively and efficiently, in which local governments must spend low costs in order to produce optimal output and later provide positive impact towards the people. In the context of the signaling theory, capital expenditure is one of the way that the local government sends signals to the people regarding expenditures of the local government in the form of relevant capital expenditure, in order for the people to use this information and support the improvement of local government financial performance in the capital expenditure aspect, since it can be directly or indirectly felt by the people in forms such as facilities and infrastructure construction, which will improve the quality of public services. Good management and financial reports indicate that an organization is running well (Sukarmi & Budiasih, 2016). A high capital expenditure indicated good local government performance. This is in line with the studies conducted by Andirfa et al. (2016), and Leki (2018), which state that capital expenditure has a positive significant effect on the local governments financial performance.
H4: Capital Expenditure positively significant on the Local Governments Financial Performance.

3. Research Methodology

This study uses the financial reports of District/City Local Governments financial report for 2016-2018 on Sulawesi Island for 243 Districts/Cities. SPSS had evaluated theories using multiple linear regression methods. The dependent variable in this analysis is local government financial performance, measured using the rate of efficiency adopted by (Mulyani & Wibowo, 2017). The independent variables in this study are: fiscal balance transfer measured using the total realization of fiscal balance transfer, local own-source revenue measured using the total realization of local own-source revenue, size of local government measured using the total revenue in comparison to the number of citizens, and capital expenditure, measured using the total realization of capital expenditure, based on the study conducted by (Mulyani & Wibowo, 2017).

4. Results and Discussion

This study using the saturated sampling method, 243 samples were taken from 81 districts/cities for a 3 years duration. However, in this analysis, only 185 samples were used after removal of outlier results. In the descriptive statistics found in Table 2, the independent variable of fiscal balance transfer has an average value of 27.3772, average local own-source revenue is 24.9595, local government size has an average value of 15.4383, and capital expenditure has an average value of 26.2176. Meanwhile the dependent variable, financial performance has an average value of 0.8690. The standard deviation the financial performance is 0.05212>0. Therefore, it can be concluded that all the data in this study is variative or not uniform. The standard deviation for the independent variables, fiscal balance transfer is 0.29352>0, local own-source revenue is 0.87545>0, local government size is 0.37500>0, and capital expenditure is 0.34294>0, therefore, it can be concluded that all the data in this study is variative or not uniform.

Table 2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
FPLG	185	,76	1,03	,8690	,05212
FBT	185	26,72	28,32	27,3772	,29352
LOSR	185	22,86	27,95	24,9595	,87545
LGS	185	14,60	16,62	15,4383	,37500
CE	185	25,31	27,34	26,2176	,34294
Valid N	185				

The t-Test aims to identify the effect of each individual variable, which are fiscal balance transfer, local own-source revenue, local government size, and capital expenditure towards the local government's financial performance in Districts/Cities in Sulawesi Island. Based on this result, it can be inferred that local own-source revenue has an impact on local government financial performance. The results of the t-Test are found in Table 3, which shows the result of the testing of the fiscal balance transfer, local government size, local own-source revenue, and capital expenditure variables towards the financial performance of local governments in Districts/Cities in Sulawesi Island. Therefore, it can be concluded that there is an effect between capital expenditure and the local government financial performance. This study uses α = 5%. The result of the regression test shows that individually, fiscal balance transfer has a coefficient value of -6.477 with a significance probability of 0.000. Based on this result, it can be concluded that fiscal balance transfer has a negative effect towards the financial performance of local governments in Districts/Cities in Sulawesi Island. This study is consistent with the theory of agencies, which states that local governments must disclose the receipt effective management of funds to the central government, promote people's welfare and enhance the quality of public services, which in effect will improve the financial performance of local government.

Table 3: Multiple Regression Analysis

	Unstandardized Coefficients		Standardized Coefficients Beta		
Model	B	Std. Error		T	Sig.
(Constant)	,928	,505		1,837	,068
Fiscal Balance Transfer	-,129	,020	-,721	-6,477	,000
Local Own-Source Revenue	,027	,006	,453	4,459	,000
Local Government Size	-,019	,013	-,141	-1,497	,136
BelanjaModal	,114	,011	,753	10,380	,000

The local own-source revenue has a measured t value of 4.459 with a probability value of 0.000. The findings of this study are consistent with analysis carried out by Mulyani and Wibowo (2017), which states that a higher local-own source revenue would boost financial performance. It is also in line with the theory used in this study, which is the agency theory, in which this local own-source revenue is revenue received from the people or stakeholders towards the local government. In this context, the local government must be responsible in efficiently managing finances in order to improve the local government financial performance. The calculated t value of the local government size variable is -1.497 with a significance probability of 0.136, which is larger than the significance rate of 5%. Therefore, it can be inferred that the size of local government size has no impact on local government financial performance. The findings of this study are inconsistent with study conducted by Mulyani and Wibowo (2017), and are consistent with the study conducted by (Dewata et al., 2017). The result of this analysis does not adhere to the signaling theory, which states that the size of a local government is determined using. The number of citizens and revenue budget in Districts/Cities in the Sulawesi Island, and therefore cannot yet be reported as a factor affecting a local government's financial performance.

A local government with a low number of citizens might not have bad financial performance, since governments with a small number of citizens must also improve the quality of services for the people. This study is not consistent with the signaling theory, in which the government would send financial management signals to the people, as people are more focused on direct impacts or outcomes that people may feel directly. Capital expenditure has a coefficient value of 10.380 with a significance probability of 0.000, which is less than the significance rate of 5%. This study is not in line with Andani and Respati (2019), and consistent with study carried out by (Mulyani & Wibowo 2017). This study consistent with the signaling theory, since a high capital expenditure indicates the construction of many facilities and infrastructure, which will be directly felt by the people, and the more designed infrastructures would increase the efficiency of public services, and local government financial performance. The local government sends signals to the people regarding expenditures made by the government in the form of capital expenditure, which can be directly felt by the people and therefore support the local government financial performance.

5. Conclusion

The aim of this study is to investigate the impact of fiscal balance transfer, local own-source revenue, local government size, and capital expenditure on the financial performance of local government. The following finding can be derived from this study after review and hypothesis testing: fiscal balance transfer have a negative effect on the local governments financial performance, local own-source revenue and capital expenditure have a positive impact on the financial performance of local governments. Meanwhile, local government size does not have relationship towards the local government's financial performance. The implications of this study in practice is to make a commitment to local governance as the engine of financial performance in local governments in order to be able to pay attention to policy and low problems and be able to enhance and raise the budget financial efficiency more effectively and efficiently. Local governments should be stable in managing their pure local revenue and be able to handle economically derived external funds. To obtain the confidence of the communities, the National Audit Board will issue a credible audit opinion which will enhance the local governments of financial performance. Further analysis to extend the objects of the study in order to be able to generalize, as well as utilize other theories and measurements besides the variables used in this study, especially the local government size variable, audit opinion and intergovernmental revenue, and to increase the sample size in order to achieve better results.

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Policy Coordination and Outcomes: Theoretical Perspectives and Empirical Evidence in Nigeria

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Abstract: The paper discusses the fiscal-monetary coordination and the resultant outcomes in macroeconomic aggregates from theoretical and empirical perspectives. The game-theoretic technique was also used to analyse the policy mix conundrum vis-a-vis the fiscal-monetary policies interaction and how that translates into optimal outcomes in an economy. However, the situation of making or forcing monetary policy to be subordinate to fiscal policy may still not generate socially optimal results. This is not far-fetched as the payoffs in the game-theoretic model suggest the presence of minimal coordination problem but high policy conflict even if both authorities are disciplined. Coordination problem and goal conflict seem to be non-existent - when both fiscal and monetary policy blocks are committed and responsible in their choices. Further analyses indicate that the policy mix of both fiscal and monetary authorities for inflation seemed complementary. Inflation responded negatively to the shock of debt in the short run. However, in the medium term, the shock becomes positive and later returns to the initial state. The study suggests that policy designs in Nigeria must harmonise both stabilisation and growth objectives to have optimal outcomes.

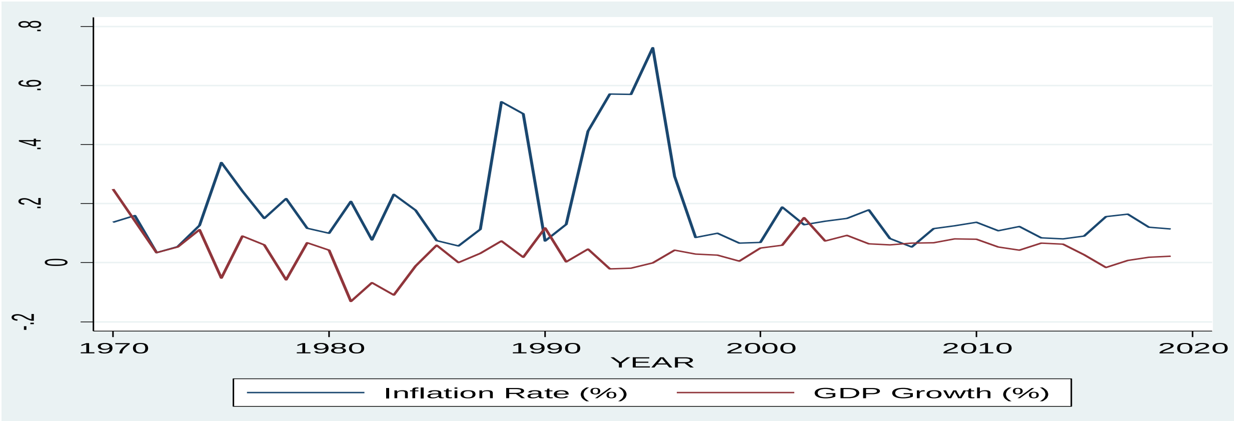
Keywords: *Macroeconomic policymaking, game theory, policy coordination, Nigeria.*

1. Introduction

Achieving optimal outcomes in economic management is linked to the relationship between fiscal and monetary policy, among other things. The issue of appropriate designs of fiscal and monetary policy is an old debate that is still very relevant today as it was when it began. The 2008-2009 global financial crises and the attendant economic recessions have further reinforced unprecedented expectations on economic policy designs, and more importantly the fiscal-monetary interactions. Both the central banks and fiscal authorities, have the preoccupation to appropriately design suitable policies in a way to secure high, sustained and inclusive economic growth, and a low, stable inflation and other objectives. In economic literature, the overall consequences of instability include high and volatile price level, high unemployment, low output and productivity, compounding public debt, huge budget deficit a growing ratio of public debt to gross domestic product and a host of others. These effects, without doubt, imply loss of welfare and therefore necessitate efforts geared at smoothening the cycles. From advanced to emerging economies as well as the developing ones, stabilisation efforts have broadly involved the joint formulation of fiscal and monetary policy at least, and their mix has always been at varying degrees. Undoubtedly, low inflation and price stability would encourage foreign capital inflow, production cost reduction, minimise uncertainties and so on. The monetary authority in Nigeria has been pre-occupied with the pursuit of low inflation since the mid-1970s.

When a double-digit inflation rate was first observed the economic distress of the late 1970s and early 1980s, due to oil glut, however, did not help the matter. Rather, in addition to other factors, the inflation rate went to up as high as 75 per cent in 1995 as shown in Figure 1, despite the introduction of Structural Adjustment Programmes (SAP) in July 1986. Ever since, achieving low (and stable) inflation rate has become the main goal of the Central Bank of Nigeria (Central Bank of Nigeria, 2012 and 2018). Since 2002, the Central Bank of Nigeria (CBN) has adopted a medium-term monetary policy strategy to stabilise prices, yet the rate of inflation is still considered as relatively high, standing at over 10 per cent (see CBN's Statistical Bulletin, 2018). The seminal work of Sargent and Wallace (1981) and subsequent studies including Dixit and Lambertini (2001) on policy effectiveness argue in support of the appropriate fiscal policy to complement monetary policy to have optimal outcomes in an economy. Understanding the interactions among policy blocks, therefore, is not only essential to mitigate fluctuations that do or may arise from shocks but also to position the economy for future stabilisation challenges. In Nigeria, empirical evidence reveals that fiscal dominance and public sector 'indiscipline' contribute to sub-optimal macroeconomic outcomes. Hence, an examination of the nature of policy interactions becomes pertinent, for a several reasons.

Figure 1: Nigeria's Inflation and Output Performance



First, the Nigerian economy has large public sector size which impacts on the market regularly. Optimal performance of the government sector may enhance the overall efficiency of the economy. Second, an activist public sector is required for accelerated growth and development in Nigeria. Third and last, Nigeria is a small open economy which requires robust domestic macroeconomic policy to mitigate the effects of internal and external shocks. The rest of the paper is organized as follows: following this exordium is Section 2 which considers the research issue while Section 3 explores economic institutions and policy coordination. Section 4 focuses on economic institutions and policymaking in Nigeria, Section 5 provides the econometric summary on fiscal and monetary policy interaction while Section 6 concludes the study.

The Issue

In the last five decades, the questions of whether government budget (deficits) are inflationary and/or why central bank authorities worry about government budgets have been arguably found to depend on how the monetary and fiscal policies interact. Hence, having stable, low inflation requires proper coordination of fiscal cum monetary policies in every economic management endeavour. In lending empirical support to this matter, Muscatelli et al. (2003), conjectured that fiscal policy, in particular, can be welfare-reducing, if both fiscal and monetary policy rules are in inertia and not coordinated. In other words, government effort at improving welfare could be counter-productive when fiscal and monetary policies are not coordinated. Achieving single-digit inflation with high, sustained growth is one cardinal objective of central banks. Notwithstanding, the degree of central bank's independence in performing its functions, there is a high level of interdependence between the monetary authorities and fiscal actions. Concerning effectiveness, optimality and robustness of the monetary policy vis-a-vis its statutory goals, there exists a large quantum of theoretical and empirical studies (for example Taylor, 1999; Sims, 1994, 2007; Gali and Gertler, 1999; Gali et al., 2007). Despite the volume of literature which shows the positive relationship between central bank independence and the effectiveness of the monetary policy.

It should, however, be noted that monetary policy is not and can never be isolated from other economic policies (including fiscal policy) in stabilising and improving the economy. Conventional practice reveals that both fiscal and monetary policies are mostly in the control of two different authorities, yet the two policies are interdependent when employed to achieve national economic goals. Therefore, any shock from either policy would necessarily influence another. As a result of this, there is the possibility of tension between what each player would do in smoothening, for instance, the business cycles. This thus establishes the fact that it is imperative to pursue consistent monetary-fiscal policy mix, and coordinate these policies to avoid (or minimise) tensions. Several theoretical issues have attributed the different pace of economic development to the quality of existing institutions in different economies. In Nigeria, like many developing economies, poor (or lack of) coordination, as well as inconsistent policies have been identified to be key factors stunting the pace of economic growth and development. The objective of the study is two-fold. First is the examination of the interdependence between fiscal and monetary policies. Second and last, the roles of the CBN, Federal Ministry of Finance and National Planning Commission in macroeconomic policymaking are discussed.

2. Institutions and Policy Coordination

Both fiscal and monetary policies are designed and implemented through various organs of government. These organs are regarded as economic institutions and an appraisal of their roles is imperative. Also, because policy coordination is the only tool for maximising policy objectives, this section provides a discussion on related concepts and other issues on the role of institutions in policy coordination using the Nigerian economic environment. Discourse on the relationship between institutions and economic development in various countries has gained increased attention, notwithstanding its omission in the modern neoclassical economics. As the refinement of theories of institutions continues, so also is the definition of an institution as a term.

Economic Institutions and its implications for Development: There have been contentions as to the appropriate definition of the term 'Institution'. The reasons for the debate are not far-fetched. Institution as a concept is applicable in all human engagements and fields of endeavours. Thus, various definitions or descriptions of institution tend to reflect its usage in different contexts. North (1989) defines institutions as rules, enforcement, characteristics of rules and norms of behaviour that structure repeated human interaction. It, therefore, suggests that an institution could be formal (such as rule or organisation) and informal (for example, norm). Specifically, an economic institution could be defined as an organisation that provides a service or product that is deemed central to a nation's economy. Economic institutions determine how an economy is allowed to develop and function to achieve stability and growth. Its main functions include determination and protection of rights, enabling and facilitation of transactions as well as giving allowance to economic actors to organise and cooperate. The formal economic institutions are, thus, the ones which help in guiding economic decisions and policies that are established by the national government. From the foregoing, institutions are regarded simply both as rules and organisations. As a rule, it helps to stabilise expectations and to condition and modify the behaviour of individuals and groups to enhance the predictability of their actions.

As an organisation, it facilitates and makes decisions to achieve national objectives. Put succinctly, concerning policymaking, an economic institution refers to any player in an economy who serves to aid the efficiency of the market system. In this article, core macroeconomic policy institutions in Nigeria include the Central Bank of Nigeria, National Planning Commission, and the Federal Ministry of Finance. The definition of economic institutions, in this study, sees it as rules and organisations that are established to influence actions and reactions of economic agents and are set aside to execute specific tasks to effect desired changes in the economy. Extant studies (for example North, 1989; Acemoglu, Johnson and Robinson, 2005; and Chang, 2006) reported that institutions play significant roles in shaping the growth and development of nations. The key areas where institutions influence development processes include changes in transaction costs; property right and the returns to investment; the power of expropriation; as well as fostering cooperation and social capital. La Porta, Lopez-de-Salinas and Schleifer (2008) also argued that economic, cultural and political considerations are among the bases for the whole essence of the existence of institutions in a society. They postulated a political theory of policy analysis that relates institutions and development, and implicitly explains inefficient policy outcomes to political leanings and patronages. This seems to be the case in many multi-ethnic, multi-religious and multi-tribal societies such as Nigeria.

Policy Coordination: Definition and Nigeria's Example: Policy coordination can be described as a set of arrangements and activities aimed at the identification of a unified framework for fiscal and monetary policies, and the introduction of commitments on policy decisions at national or super-national level (Pisani-Ferry, 2002). Another form of definition, credited to Fatas and Mihov (2003), is that coordination must be understood as an agreement to enforce fiscal discipline among the fiscal authorities to avoid any spill over caused by irresponsible policies. These definitions underscore the importance of agreement between various policy authorities. Furthermore, policies are coordinated when all organs responsible for policy decisions in an economy have an avenue through which the policymaking process is centralised. Coordination of policy does not necessarily require that monetary authority, for instance, would have to wait for the fiscal block before he prepares his goals, targets and instruments. Rather, policy coordination entails having a common aim, of minimising to the barest minimum, the trade-offs involved in policy implementation. Two crucial motivations for coordination in policy decisions include fiscal dominance as well as monetary dominance.

Fiscal dominance occurs when current and future values of government budget variables are set independently by the fiscal authority, stating the share of the revenue from bond and seignior age expected to be facilitated by the monetary authority. The various implications presented by either fiscal or monetary dominance necessitate policy coordination, and according to Sargent and Wallace (1981) as well as Arestis (2012), policy outcomes would be inefficient without coordination. To achieve efficient macroeconomic objectives, policymakers must coordinate their activities (Sargent and Wallace, 1981). Therefore, a particular policy authority would achieve its objective(s) given its constraints if there is proper coordination between all the authorities involved in policymaking. Specifically, for instance, prolong and unchecked fiscal profligacy would put pressure on price stability function of the central bank, notwithstanding the kind of monetary framework it may adopt. In a similar vein, a tight and non-accommodating monetary regime, expressed in form of high-interest rate, may speed up the fiscal authority in achieving its highlighted motives for expansionary spending, at the least. Thus, the extent to which either policymaker will go at achieving its goal depends on how both fiscal and monetary policies are conducted. Generally, government policies such as privatisation and trade liberalisation are designed to allow for private economic agents to operate.

But lack of coordination has been identified as one principal cause of inefficiencies that characterised the Nigerian economy. This is because the procedures involved in policy decisions require contributions from various stakeholders in and within an economy. Most of the contributions into policy formulation are transmitted through relevant government institutions that are saddled with the responsibility of putting together sets of measures for efficient management of the economy. The mandates of Nigeria's economic bodies include facilitation and coordination of policy interventions in one form or another. Several inefficient macroeconomic outcomes such as wide exchange rate fluctuations, high unemployment level, unstable price levels and a host of others have been found to have positive correlations with poor or improper (or lack of) coordination in Nigeria (Panico and Suarez, 2008; Iyeli and Azubuike, 2012). The main task of economic management is jointly undertaken, at least, by both the fiscal and monetary authorities in most cases. In Nigeria, macroeconomic policymaking involves, among others, the Federal Ministry of Finance; Central Bank of Nigeria; National Planning Commission; Debt Management Office; and Budget Office of the Federation with each attending to specific aspects of policy decisions, as contained in the various Acts that established them. To this end, this essay also examines the roles of various institutions in Nigeria's policy design and assesses the macroeconomic performance of the economy concerning the policy choices.

Rationale for Fiscal-Monetary Policy Coordination: The overall goal of economic policy is to enhance the living standard of citizens through the pursuance of low inflation and sustained growth, using mainly the instrumentality of fiscal and monetary policy. The implication is that the use of fiscal and monetary policy instruments often creates conflicts, more importantly when the two instruments share no identical objectives. Therefore, a need for a sufficient coordination mechanism between these authorities has emerged as a necessity to achieve the desired goals of economic policy. Interdependence between fiscal and monetary policy and its effects on the economy as a whole gives rise to the reason why the two policies need to be coordinated. The need for fiscal and monetary policy coordination has been recognised as far as the golden era of the Keynesian theories. Paul Samuelson underscores this fact by stating: There is no legitimate clash between Treasury and Central Bank policy: they must be unified or co-ordinated based on the over-all stabilisation needs of the economy. It is unthinkable that these two great agencies could ever be divorced in functions or permitted to work at cross purposes.

In particular, it is nonsense to believe, as many proponents of monetary policy used to argue, that fiscal policy has for its goal stabilisation of employment and reduction of unemployment, while monetary policy has for its goal the stabilisation of prices. In comparison with fiscal policy, monetary policy has no differential effect on prices rather than on output. I have already asserted that the Treasury and Central Bank have to be co-ordinated in the interests of national stability, so I am little interested in the division of labour between them (Samuelson, 1956, pp 14-15 cited in Panico and Suarez, 2008). Various theoretical models that attempt to identify factors that call for fiscal and monetary policy coordination suggest five key areas that have given rise to the coordination of fiscal and monetary policy. These include; the prevalence of fiscal indiscipline, the perverse effects of inflation conservatism of the monetary authorities on the fiscal objectives and absence of commitment to fiscal discretion and the monetary rule. Others are the existence of decentralised fiscal authorities and the aggregate demand inflation effects of policy interactions.

Taking into account the importance of these factors, economic policymaking would only be meaningful when proper coordination is fashioned out. A schematic representation of possible scenarios in fiscal-monetary interaction in a game-theoretic approach is shown in Figure 2. The description of the policy authorities are as follows: the fiscal policymaker can either be Responsible or Irresponsible whereas the monetary authorities can either be committed or Non-Committed. Whenever a fiscal authority chooses to be responsible and monetary authority gets committed, they are regarded as being disciplined {D}. An irresponsible choice by the fiscal policymakers and a non-commitment choice by the central bank connotes Indiscipline {I}. A disciplined monetary authority seeks to have low inflation, but it becomes indiscipline when he overshoots the inflation target, whereas the Government, representing the fiscal authorities, is said to be disciplined when he runs a balanced budget while a fiscal deficit decision qualifies him to be regarded as indiscipline. The 'D' option is socially optimal and desirable but the 'I' is socially inferior and not desirable. The panel indicates that an act of discipline by a committed central bank and a responsible government has rewards in terms of zero coordination problem and assurance of socially optimal outcomes. In sum, in terms of efficient policy outcomes, it pays best for both authorities to be disciplined, that is, to target low inflation within a balanced budget framework, since there is no coordination problem associated with it (Franta et al., 2011).

Figure 2: Games Pay-Offs

GOVERNMENT **CENTRAL BANK**	**Responsible**	**Ambitious**
Responsible	Symbiosis	Tug-of-war Battle of the sexes Neglect
Ambitious	Indeterminate	Games of chicken Prisoners dilemma Battle of the sexes Neglect

Source: Franta et al. (2011).

In Figure 2, Pure Nash lists all possible equilibriums if each policy decision-maker chooses either discipline or indiscipline option that he considers efficient for him. The mixed Nash indicates efficient outcome but more than one possible option in each scenario. Moreover, the columns 4, 5 and 6 indicate the implications of each scenario for policymaking, representing the presence of a problem in coordination, conflict in policy goals and the possibility of attaining efficient or socially optimal outcomes within an economy respectively. A game-theoretic description of the interactions between the central bank and the government is presented in Figures 1 and 2. However unlike in the Franta et al. (2011), the pay-offs are expressed in terms of the policy objectives and are redefined for each authority. The Central Bank of Nigeria is disciplined if it commits to its stated single-digit inflation target and naira exchange rate stability, but becomes indiscipline if it does not.

The government, on the other hand, is disciplined if it is fiscally responsible for attaining budget deficit of less than four per cent of the gross domestic product and high growth rate (see Figure 3). In the framework, a subservient monetary policy is found (as in Panel 1 of Figure 3). The scheme reflects a situation where the government (such as under the military administration) subjects monetary decisions to the preference of the Head of State or his appointed Minister of Finance. The second (Panel 2 of Figure 3) reflects the case where the Central Bank of Nigeria enjoys autonomy and is allowed to influence monetary decisions by rule. The payoffs of choices either to be committed or not on the part of the monetary authorities and be responsible or irresponsible by the fiscal policymakers are indicated by the macroeconomic outcomes in each quadrant of Figure 3. Both authorities should choose to be disciplined since the most efficient economic outcomes are guaranteed.

Figure 3: Possible Outcomes of Policy Games

Scenario	Pure Nash	Mixed Nash	Coordination Problem	Policy Conflict	Social Optimal Outcomes
Symbiosis	(D,D)	No	No	No	Yes
Pure coordination	(D,D)(I, I)	Yes	Yes	No	Likely
Battle of the sexes	(D,D)(I, I)	Yes	Yes	Yes	Uncertain
Game of chicken	(D, I)(I, D)	Yes	Yes	Yes	At most one policy
Tug-of-war	(D, I)	No	No	Yes	Only monetary policy
Prisoners dilemma	(I, I)	No	Yes	No	No
Neglect	(I, I)	No	No	No	No

Source: Franta et al. (2011).

Panel 1: Fiscal Authorities Subordinate Monetary Policy

Government / Central Bank	Fiscally Responsible	Fiscally Irresponsible
Committal	Moderate inflation Low/high growth rate	Double-digit inflation Negative or low Growth Stagflation
Non-Committal	Inflationary growth rate Low growth	Explosive public debt Debt crisis Weak currency

Source: Author's construct.

Panel 2: Fiscal and Monetary Policies are Coordinated

Government / Central Bank	Fiscally Responsible	Fiscally Irresponsible
Committal	Single-digit inflation Stable exchange rate High growth rate	High inflation High deficit and Unemployment Low growth rate
Non-Committal	Inflationary growth rate	Debt crisis High debt burden Jumping inflation

Source: Author's construct.

However, the situation of making or forcing monetary policy to be subordinate to fiscal policy may still not generate socially optimal results. Moreover, the payoffs in Figures 2 and 3 further suggests the presence of minimal coordination problem but high policy conflict even if both authorities are disciplined. However, coordination problem and goal conflict seem to be non-existent in Figure 2 when both policy blocks are committed and responsible in their respective choices.

3. Economic Institutions and Policymaking

Economic policymaking entails a lot of processes and procedures which necessitate participation of some public bodies, private sector and other stakeholders, including the civil societies. An overview of the origin, functions, and management composition of main government agencies that participate in the public policy process in Nigeria is presented to show their roles in policy formulation in Nigeria.

Central Bank of Nigeria and Monetary Management: Monetary policies are set of measures to control credit and money supply to achieve specified macroeconomic objectives which include low inflation or price stability, high and sustained economic growth, a favourable balance of payment etc. The conduct of monetary management is assigned to the central bank. Monetary policy derives its relevance from the fact that it influences aggregate spending, which in turn affects employment, investment and living standards. In Nigeria, the Central Bank of Nigeria (CBN) manages the monetary policy and works to attain its policy goals. Although the monetary policy decisions rest with the CBN, the overall outcomes are products of various interrelated activities of many organs of government.

Monetary Policy Process, Formulation and Implementation: Like most economies, monetary policy design in Nigeria has largely reflected the stage of economic development in general and the level of financial development in particular. The CBN's mandate of ensuring price stability and other goals has been pursued using monetary targeting framework, especially in the last three decades and its main goal has been to attain low (single-digit) inflation (see CBN Monetary Policy Review, 2010, 2012 and Annual Report, 2018). The formulation and design of monetary policy lie with the Monetary Policy Committee (MPC). The membership of the MPC comprises twelve members, including the Governor of the CBN as the presiding officer as well as three members appointed by the President of the Federal Republic of Nigeria. Other members are all the four Deputy Governors of the CBN, two non-executive members who are also among the Directors of the Banks' Board as well as two members appointed by the Governor of the CBN. The MPC reviews both the domestic and external conditions, such as foreign exchange market supply and demand, to make realistic decisions. Based on the liquidity conditions in the financial system, as may have been captured by the available data, the MPC formulates monetary policy actions to be taken in the immediate period. According to Ezema (2007), the CBN would consider the development in the economy over a period, articulates the main challenges for achieving its objective of price stability and design a mechanism, which is essentially based on a monetary programme which sets out future trends.

In macroeconomic aggregates to guide its monetary policy implementation the review proceeds from comparing the actual macroeconomic aggregates with the projections. Among the measures of the MPC's decisions is the Monetary Policy Rate (MPR) which is always announced after every meeting of the MPC. For instance, an upward inflationary tendency or excess liquidity posture may necessitate a higher policy rate whereas the rate may be reviewed downward if the economy suggests otherwise. In Nigeria, monetary policy has been implemented under both direct and indirect systems. Up till the mid-1986, monetary policy was regulated making the authorities to depend on the use of credit ceiling, administered interest rates, and sectoral allocation of bank credit (Onyido, 2001). The credit ceiling was extensively employed to restrain money stock, supplemented by the use of reserve requirements and occasionally, other measures. Besides, banks tended to circumvent direct controls while, the latter did not promote competition in the financial sector, thus affording protection to inefficient institutions. Since the introduction of the Structural Adjustment Programme in July 1986, the implementation of monetary and financial policies has primarily been via an indirect approach. The deregulation of the economy paved the way for monetary policy instruments such as the Open Market Operation (OMO), Discount Window Operations (DWO), liquidity ratio, Cash Reserve Requirement (CRR) and interest rate policy which are used to execute monetary policy in the country, most especially since 1993.

Ministry of Finance and Fiscal Policy: Origin, Functions and Structure: The Finance (Control and Management) Ordinance established the Federal Ministry of Finance in 1958, to replace the then Finance

Department. The Ordinance conferred on the Ministry, the responsibility for the control and management of the public finance of the Federation. Specifically, the functions of the Federal Ministry of Finance are to: prepare annual estimates of revenue and expenditure for the Federal Government; formulate policies on fiscal and monetary matters; mobilise domestic and external financial resources through both internal and external financial institutions, for development purposes; maintain adequate foreign exchange reserves aimed at ensuring a healthy balance of payment position; and to maintain the internal and external value and stability of the Nigerian currency. To a reasonable extent, the credit ceiling was effective, the impact of restrained credit was felt in terms of demand pressure on the foreign exchange market. Others are to monitor government revenue from oil and non-oil resources; supervise the insurance industry; manage revenue allocation matters; and to relate with relevant international and financial institutions.

Such as the Economic Commission for Africa, World Bank, International Monetary Fund, European Union and so on. The Minister of Finance is appointed by the President of the Federal Republic of Nigeria with the approval of the Senate. He/she oversees the Finance ministry on a day-to-day basis although, he/she can be removed without legislative approval. Similar to very many organisation and developing economies, Nigeria's fiscal policy primary instrument has been the annual plan or the budget. The budget contains an estimate of expected revenue and anticipated expenditure for some time, say a year. In Nigeria, the Federal Government's budget preparation is done by the Ministries, Departments and Agencies (MDAs) and its coordination is vested in the Federal Ministry of Finance, through the Budget Office of the Federation (BOF). The management of fiscal policy in Nigeria has improved since the transition to a civilian administration. In consultation with the Presidency, the Minister of Finance adjusts the budget estimates as necessary after due scrutiny and inputs from policymakers in the ministry and then present it to the Federal Executive Council for consideration and possible adoption (Idowu, 2010).

The adopted estimates become the Appropriation Bill, which the President normally presents to the joint session, of the National Assembly for deliberation, consideration and passage, in most cases with some adjustments. The MDAs are called upon to defend their proposal by the legislators who thereafter put the Bill forward to the President for consent to make it an Appropriation Act. Today's Federal Government budget items are based on the Medium-Term Fiscal Framework. The main thrust of fiscal policy of the Federal Government has been to promote job creation and real growth of the economy through the pursuit of sound macroeconomic programmes and reforms. Apart from the statutory units in the Finance Ministry, there are other (ad-hoc) Committees like National Economic Intelligence Committee, National Economic Management Team under the leadership of the Presidency, National Economic Council presided over by the Vice President, National Council of States and others that contribute or advise on economic matters. There are several subsidiary units of the Federal Ministry of Finance and it includes the Budget Office of Federation, Debt Management Office, and the Federal Inland Revenue Services which function in implementing fiscal policies in Nigeria. All the activities of these units are coordinated by the Ministry.

National Planning Commission and Nigeria's Policy Coordination: The main philosophical objective for setting up the National Planning Commission (NPC) was to provide the knowledge base from which operational policies can be obtained for guiding the nation's planned efforts towards transforming the economy into a modern, robust and resilient one. The NPC has since 1985 undergone major transformation. In 1988, Decree 43 enforced the merger of the NPC with the Budget Office in the Ministry of Finance to become the Office of Planning and Budget in the Presidency which later became Federal Ministry of Budget and Planning in January 1990. The National Planning Commission (NPC) was originally established by Decree No 12 of 1992 and later amended by Act 71 of 1993 and charged with overall responsibility for matters relating to national economic planning, the annual capital budget and overall national economic management. The specific core responsibility is the formulation of medium-term and long term economic and development plans for the nation. The functions of the Commission include: to provide policy advice to the President, Commander-in-Chief of the Armed Forces of Nigeria in particular on all spheres of national life; to set national priorities and goals, and engender consensus among Government agencies, corporate bodies and workers' unions in support and accomplishment of such priorities and goals as may be contained in the guidelines issued by the Commission from time to time.

To monitor projects and progress relating to plan implementation; and to formulate and prepare long, medium and short term national development plans and coordinate such plans at the Federal, State and Local Government levels. Others are to undertake periodic reviews and appraisal of the capabilities of the human and material resources of Nigeria to advance their development and efficiency and effective utilisation; to mobilise popular group and institutional consensus in support of Government policies and programmes; to manage multilateral and bilateral economic co-operations, including development aid and technical assistance programming, and finally to conduct research into various aspects of national interest and public policy and ensure that the implications and results of the findings in such research are geared towards the enhancement of national economic, social, technological, defence and security capabilities and management.

Policy Decisions and Economic Performance in Nigeria

Fiscal Behaviour and Monetary Response in Nigeria: Historical facts showed that central banks, such as Bank of England, were obliged to advance loan facilities to the fiscal authorities due to functions as a lender of, last resort and manager of the legal tender currency, who has statutory order to issue and print banknotes (Merwe and Mollentze, 2010). The loans were advanced by the Central Banks to the Government mainly in times of economic needs. The Central Banks were allowed to shore-up their capital base and cash reserves to have funds for government loan financing. The loan could be temporary or permanent. Merwe and Mollentze (2010), noted that, up till 1914, the loan advances were backed with tax revenue and proceeds from bond subscribed to by members of the public. It was reported that both the World Wars I and II were funded by Central Banks in form of loan to the Governments, making the Central Banks' holdings of Government securities the main components in their asset portfolio. The turn of events in mainstream macroeconomics in the 1970s impacted on economic policy design of the 1980s and many countries adopted policy rules in monetary policy decisions. As for the monetary policy rules, the target was set for the money supply, interest rates and the exchange rates.

Beginning in 1990, some countries have embraced setting targets for inflation in monetary management, leading to the inflation-targeting framework. On the fiscal side, policy rules were mainly directed towards cutting wasteful spending and reducing the level of external debt (see Sims, 2011). The resultant effects of the adoption of rules were that public finances became sustainable and dependency on Central Banks for deficit financing reduced significantly (or almost non-existent) in most Western and some developing countries. As a developing country, Nigeria's policy formulation and approach followed the observed patterns in international communities. Several economic frameworks have guided economic activities in the few decades of Independence in Nigeria. Between 1960 and 1985, there were four National Development Plans, followed by a three-year Rolling Plan over 1990 and 1992 and a long-term perspective of twenty-five years. Other plans or programmes include the National Economic Empowerment and Development Strategy (NEEDS) I and II, the Seven-Point Agenda and the Transformation Agenda. In addition to the policy efforts made over these years, the economic outcomes have also been immensely influenced by the political environment. Over the period 1960 to 2019, the country's politics has oscillated between military and civilian forms of government, and about thirty years were spent by the military rulers though.

The last twenty years, 1999 - 2019, have uninterruptedly been under a participatory democratically elected civilian administration. The two forms of administration had different implications for policy design and its outcomes. The military regime expended much energy and resources on self-seeking perpetuity in the office at the expense of the economy. The Central Bank of Nigeria was subsumed under the military Head of State, implying loss of (or limited) independence. Monetary policy was proposed through the Federal Minister of Finance or by a means of a memorandum sent by the Central Bank directly to the Presidency. On the other hand, among other things, the CBN (2007) Act suggests greater autonomy for the CBN and its policymaking in some areas. For instance, the Governor of the CBN would report in testimony to the National Assembly on its operation rather than seek approvals for monetary policy measures through the Minister of Finance (Onyido, 2001 and CBN, 2007). Table 1 shows the monetary responses to various fiscal behaviour in Nigeria, covering the period over 1981 to 2017. As shown in Table 1 the growth in fiscal deficit over the period has been very unstable. There was a marked increase in fiscal spending that resulted in a deficit of between 2.69 and about 6.00 per cent between 1981 and 1999. The fiscal deficit however reduced consistently since 2000, suggesting a restraint on excess spending.

In 2009, the government spending growth rate was just 1.83 and rose to 3.24 in 2017. Fiscal deficit was consistently downward from 2001 (2.72 per cent) to 2008 (nearly zero per cent). The implication of the fiscal operations for monetary policy is reflected in the proportions of fiscal deficit that is financed by the CBN. The low deficit witnessed could be attributed to various reforms in the public sector. Though an upward deficit trend from 0.12 per cent in 2008 to 1.83 in 2009 was noticed, it fell marginally in a gradual order, all through to 1.44 in 2013 and 0.94 per cent in 2014. The main characteristic of the fiscal actions is that the earnings from crude-oil sales have been the sole determinant of government spending during the period - expenditure was high when earnings went up and shrank during low proceeds from oil sales. Monetary management was primarily carried out to ensure price stability. To this extent, the CBN acted and responded in a manner dictated mainly by the public sector in Nigeria.

Table 1 shows the extent to which the CBN financed the budget deficit of the Federal Government from 1981 to 2017. In addition to being a banker to the Federal Government, the CBN raises loan on its behalf and takes up a whole or a part of the deficit. As contained in the table, between 1981 and 2017, the highest per cent of the budget deficit was in 1999 amounting to 5.37 whereas the largest take-up by CBN was in 2015, 615.96 per cent. In a bid to contain inflationary pressure in the Nigerian economy, the CBN mopped-up money from the coffers of the Federal Government leading to negative financing of annual average in 1984 to 1985, 1989 to 1990 and over 1996, 2000 and 2002. In 2003, 94.05 per-cent of fiscal deficit was financed by the CBN. While the CBN rather tightened money supply in 2008, the proportion that was mopped-up was just 4.21. It should be noted that Table 1 is a reflection of loosening and tightening policy of the CBN to ensure stability in the economy.

Table 1: Fiscal Deficits and Distribution of its Financing

Years	Fiscal Deficit (% of GDP)	CBN Financing (% of Deficit)	Bank Financing (%)	Non-Bank (%)
1981	-2.69	3.62	3.02	1.18
1982	-3.94	2.99	3.99	0.41
1983	-2.06	3.27	5.3	1.76
1984	-1.56	-1.42	2.37	0.56
1985	-1.58	-0.57	0.79	-0.21
1986	-4.08	6.04	0.48	0
1987	-2.36	0.59	2.81	3.66
1988	-3.8	7.47	6.1	2.26
1989	-3.61	-6.48	-9.24	3.44
1990	-4.43	-1.5	2.73	3.36
1991	-6	18.43	31.11	1.01
1992	-4.35	46.43	33.6	13.12
1993	-5.18	62.38	3.02	1.73
1994	-3.99	41.25	3.99	19.35
1995	0.03*	7.31	5.3	-10.72
1996	0.85*	-52.29	2.37	9.95
1997	-0.12	12.8	0.79	2.24
1998	-2.91	174.88	0.48	-5.1
1999	-5.37	-	2.81	-18.56
2000	-1.5	-16.21	6.1	30.31
2001	-2.72	225.69	-9.24	-18.01

2002	-2.66	-200.17	2.73	88.23
2003	-1.52	94.05	31.11	29.5
2004	-1	0	33.6	46.5
2005	-0.72	0	0	143.5
2006	-0.35	0	0	45
2007	-0.36	0	0	40.21
2008	-0.12	-4.21	159.8	82.78
2009	-1.83	0	67.9	394.98
2010	-2.04	118.45	175.61	354.45
2011	-1.83	6.2	749.7	355.84
2012	-1.37	45.35	496.43	273.11
2013	-1.44	58.71	471.34	257.73
2014	-0.94	-	510.44	195.37
2015	-1.65	615.96	428.83	111.87
2016	-2.18	0.2	834.09	524.6
2017	-3.24	-	0.2	1,180.00

Source: Computed from the Central Bank of Nigeria Statistical Bulletin (various editions). **Notes:** The years with asterisks (*) had a fiscal surplus.

A cursory look at the general macroeconomic indicators and monetary aggregates such as inflation and real output (See Figures 4 – 7) reveals the extent of effectiveness of the policy responses. The output, inflation, money supply and credit to private sector (outcomes and targets) data indicate that fiscal activities might have posed some difficulties for monetary policymakers. Specifically, the money managers are confronted with some issues which include lack of coordination in (and excessive) fiscal spending among Nigeria's local, state and federal Governments; cohesive monetisation of fiscal deficit by the CBN; monetisation and sharing of the excess crude-oil earnings among the tiers of governments and frequent use of supplementary budget for non-contingent activities.

Figure 4: Policy Games and Outcomes in Nigeria

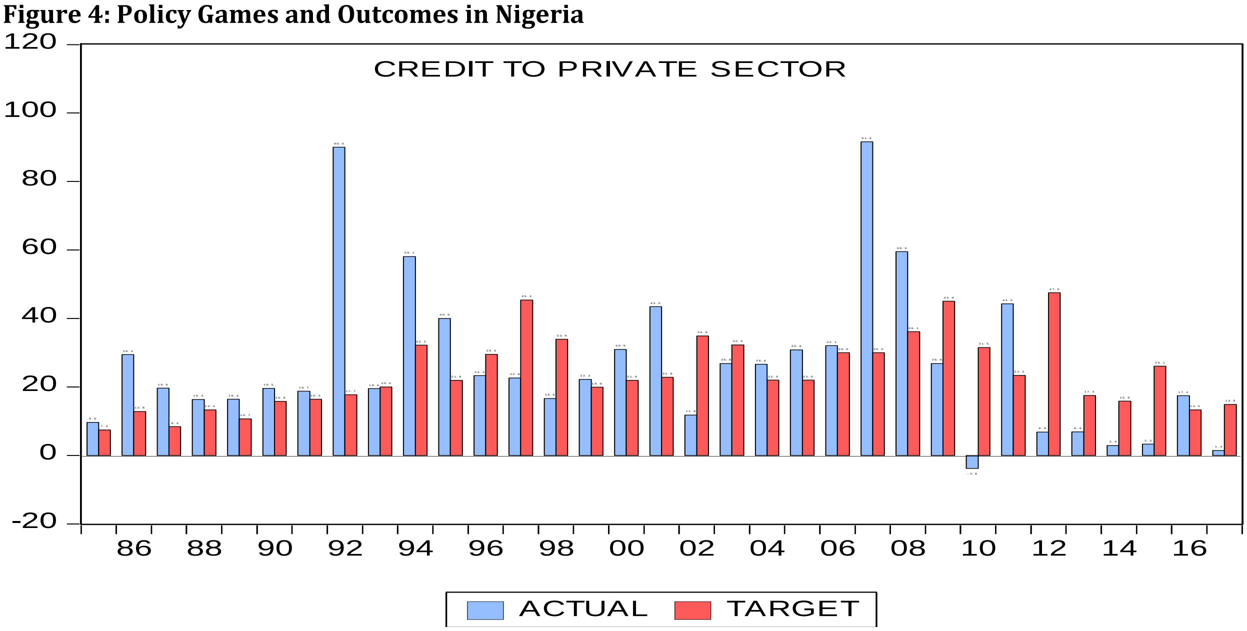


Figure 5: Actual and Target Credit to Private Sector in Nigeria

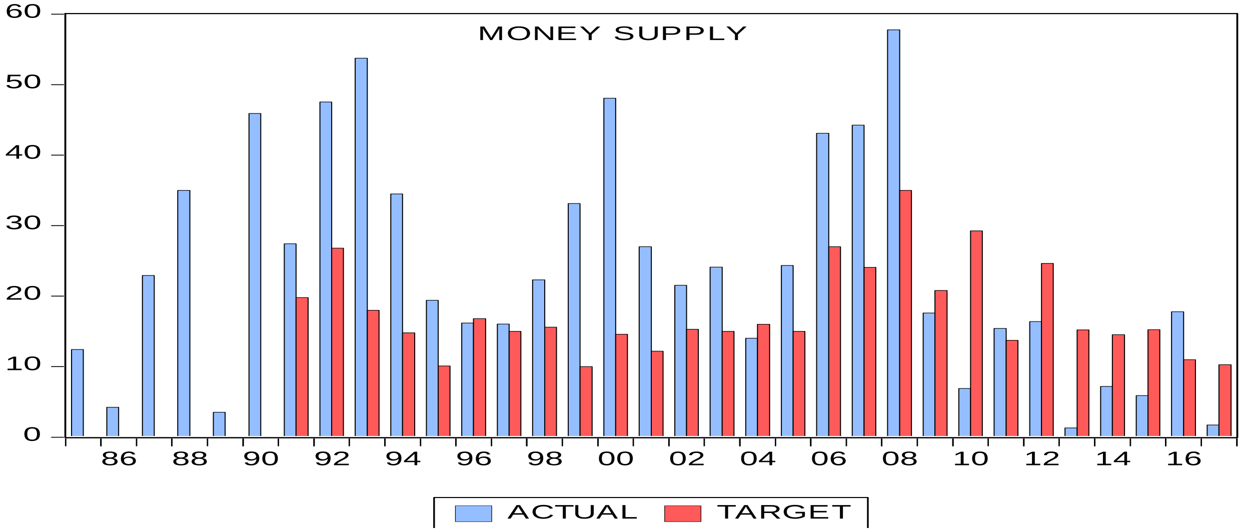


Figure 6: Real Output in Nigeria

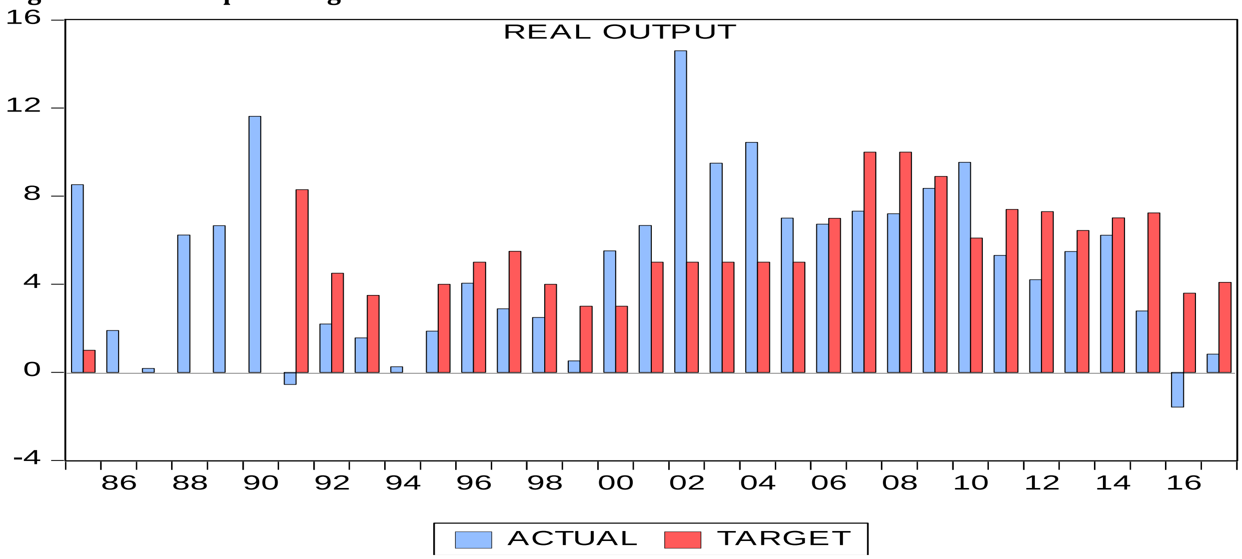
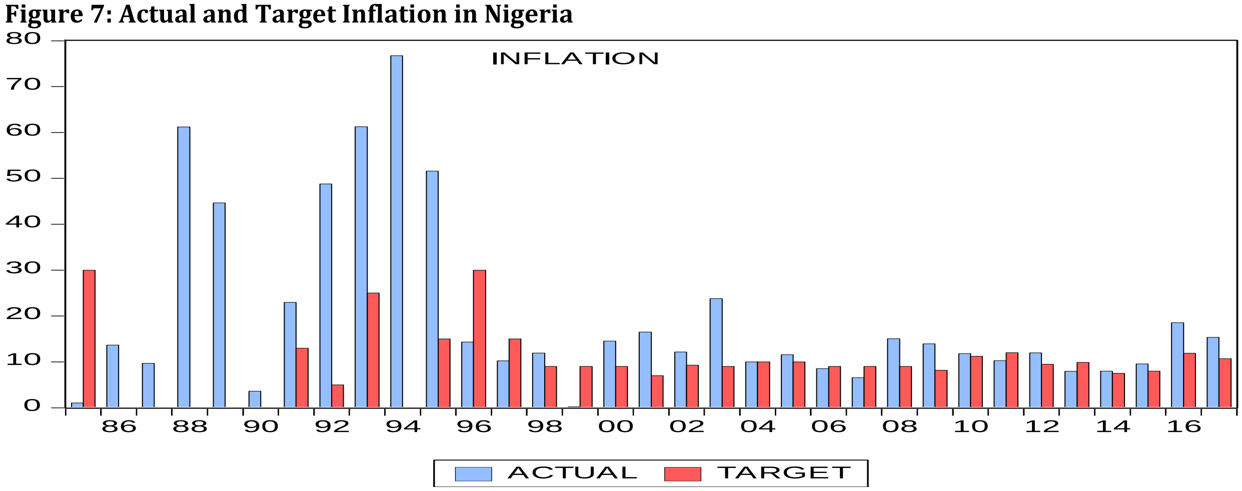


Figure 7: Actual and Target Inflation in Nigeria



Measures for Efficient Policy Outcomes in Nigeria: Some specific economic reform measures taken since 2003 to redirect the Nigerian economy include Monetisation Policy, Introduction of Contributory Pension Scheme, Public Procurement Policy Unit; Introduction of Medium Term Plan in the Budget Process; Enactment of Fiscal Responsibility Act in 2007; Prudent Fiscal Regime and Efficient Public Sector Management and the Signatory to the Convergence Criteria required for forming the West African Monetary Zone of 4 per cent; as well as Banking Reforms including Consolidation and Recapitalisation. The effects of the various policy measures are observed in the performances of some macroeconomic variables and targets, as summarised in Figures 4 - 6. For instance, in Table 1, the contribution of the non-bank public to deficit financing has improved. From a low level of less than 30 per cent in 2003 to 1,180.00 per cent in 2017, reflecting improvement in the money and capital markets and in turn the participation of the public in financing borrowing. Moreover, inflation has reduced significantly from about 75 per cent in 1994 to nearly 15 per cent in 2017 with a marginal deviation between actual and target rates. Similarly, the growth rate of real output has regained positive trend, more importantly since 2003.

Challenges of Policy Coordination in Nigeria: The foregoing has shown that policy coordination is crucial for efficiency and effectiveness in economic policy. However, some issues must be addressed to realise the full benefits of coordination in Nigeria. These include:

Manpower Planning: Human capacity building in the public sector for policy purposes and entrenchment of economic efficiency in policy designs is critical to sustaining economic progress that appropriate policy coordination may be used to achieve. Adequate and capable human resource would not only enable rich policy formulation but also it would allow proper implementation, evaluation and assessment of policy measures. Also, the availability of skilled manpower to manage every phase of the policy cycle tends to minimise potential conflicts in public policy management.

Accurate, Reliable and Timely Data: Improvement in the activities of the data or information management agencies such as the National Bureau of Statistics to release timely, reliable and adequate data on socio-economic and political activities may enhance development planning and subsequent policy design. Central Bank autonomy allows the choice of monetary instrument independently with or without consideration for fiscal policy, more importantly in the inflation-targeting monetary framework. Since monetary policy actions, for instance, are taken based on the data on economic variables such as money supply and inflation; reliable, accurate and timely data would serve to support efforts aimed at promoting and sustaining efficient economic performance. This is because data serves as both an input factor and a feedback variable for policymakers.

Economic and Political Stability: Macroeconomic outcomes have indicated that the Nigerian economy has enormous potential for growth and prosperity if both political and economic environments are conducive for appropriate policy implementation. The performance of the last twenty years could be sustained if policies are coordinated and each economic agency is empowered adequately to play its role as stipulated or enshrined in their various statutes or Acts. Besides, Nigeria has a high dependence on the foreign sector and is very susceptible to developments therein; therefore, uncertainties in policy process due to foreign shocks may be eliminated by speedy diversification of the economy, dependence on local materials or products and a host of other measures.

Institutional Arrangement: The composition of the members of the Monetary Policy Committee does not mandate that the Permanent Secretary of the Federal Ministry of Finance to attend the Committee's meetings, thus, the monetary policy decisions may at times lack adequate input from fiscal authorities particularly if the monetary authorities want to punish the government for its irresponsibility. A rearrangement in the composition of the membership of the Central Bank of Nigeria to allow for a solid and adequate representation of the Ministry of Finance might be necessary for efficiency in policy matters in Nigeria. This will ensure a robust fiscal-monetary policy interface, particularly as it concerns policy formulation.

Political Economy of Policy Formulation: Naturally, the political consideration tends to dominate the economic side of the policy process since the approval and implementation depend largely on public office holders, many of whom are politicians. Therefore, efficiency in policymaking would require an adequate statement of possible policy options and their consequences. The options are expected to factor in various interests of groups and the State to allow for broad choices, and eventually avoid possible delay or rejection of policy proposal.

4. Further Evidence on Fiscal-Monetary Interactions in Nigeria

The purpose of this section is to present a brief econometric analysis of the interactions between fiscal and monetary policy and its effects on key macroeconomic variables in Nigeria. The relative effect is crucial for understanding the underlying processes that shape the dynamic behaviour of the economy in general, and the mutual dependence of fiscal and monetary policy instruments in particular. Since economic policies interact essentially to stabilise shocks, allocate resources and/or remove structural rigidities; the complementary or substitutability of both fiscal and monetary policy instruments, over the Nigerian business cycle, is therefore discussed.

Existence of Stationarity and Long-Run Relationship: The long run relationship exists if variables are cointegrated following the value of F-statistic in the Bounds test, which would be greater than the upper bound value of the critical value at a certain level of significance (Pesaran et al., 2001). If otherwise, the test is inconclusive or has no long-run relationship. The result from Bounds test in Table 3 showed that F-statistics (4.093) is above the upper critical bound at 5% level of significance. Hence, we conclude that there is a long-run relationship between the variables. The Augmented Dickey-fuller (ADF) and Phillip-Perron (PP) tests for unit root show that all the variables were at least stationary at the first difference, hence enabling the use of Bounds test for cointegration. The cointegration test confirms that there is a long-run relationship among the variables since the value of the F-statistic is greater than the upper bound critical value at 5% level of significance.

Model 1 reveals that fiscal balance and interest rate have a positive impact on RGDP both in the long and short runs. That is, instruments of fiscal and monetary authorities have the same effect on RGDP. However, the fiscal balance has a weightier effect on RGDP as suggested by its higher coefficient both in the short and long-run horizon. On the other hand, Model 2 reveals that fiscal balance and interest rate both have a direct (complimentary) effect on inflation in the short run but in the short run the effect of fiscal balance on inflation becomes negative while that of interest rate remains positive. In sum, fiscal and monetary authorities have a contrast impacts on inflation in the long run, indicating *poor* policy coordination over growth trend in Nigeria. The speed of adjustment term for both models have coefficients that are substantial, negative and significant as expected. The diagnostics tests reveal that the models have the desired properties.

Table 2: Unit Root and Cointegration Tests

Variables	**Order of integration (ADF)**	**Order of integration (PP)**	**Status**
RGDP	I(0)	I(0)	Stationary
MONEY	I(1)	I(1)	Non-stationary
INTEREST	I(0)	I(0)	Stationary
INFLATION	I(0)	I(0)	Stationary
FISCAL	I(0)	I(0)	Stationary
	Bounds test		
	F-statistic	4.092694	
Significance		I(0) Bound	I(1) Bound
10%		2.45	3.52
5%		2.86	4.01

2.5%	3.25	4.49
1%	3.74	5.06

Source: Author's computation

Table 3: Short-Run and Long-Run Coefficients

Variables	Model 1 Dependent Variable: RGDP	Variables	Model 2 Dependent Variable: INFLATION
Short-run coefficients			
D(FISCAL)	0.851 (0.0315)	D(GDPGROWTH)	-0.827 (0.2096)
D(INFLATION)	-0.098 (0.0143)	D(FISCAL_BAL)	1.084 (0.5388)
D(INTEREST)	0.502 (0.0064)	D(INTR)	0.758 (0.3491)
D(MONEY)	-0.570 (0.1804)	D(MONEY_SUPPLY)	0.408 (0.5475)
ECM(-1)	-0.667 (0.0000)	ECM(-1)	-0.501 (0.0043)
Long run coefficients			
FISCAL	1.276 (0.0344)	GDPGROWTH	-1.649 (0.1843)
INFLATION	-0.147 (0.0157)	FISCAL_BAL	-5.016 (0.3220)
INTEREST	0.752 (0.0020)	INTR	1.513 (0.2957)
MONEY	0.011 (0.9647)	MONEY_SUPPLY	0.814 (0.5850)
C	-3.741 (0.4883)	C	-24.534 (0.4272)

Source: Author's computation

Table 4: Diagnostic Tests for the Models

Tests	Probability (Model 1)	Probability (Model 2)
Breusch Godfrey LM test	0.7970	0.0962
Jarque-Bera Normality	0.0240	0.0000
Breusch Pagan Godfrey	0.4950	0.3049
Ramsey-reset test	0.6323	0.0025

5. Conclusion and Policy Recommendations

The paper presented a reflections on the relationship between fiscal and monetary policies interactions in Nigeria. It also examined the role of the Federal Ministry of Finance, which oversees the fiscal operations of the Federal Government, the Central Bank of Nigeria oversees the monetary policy and other government agencies involved in the formulation and implementation of policies. Using the payoffs in policy games, there are possibilities of achieving efficient outcomes when both the central banks and government commit to stated policy objectives. Due to the fiscal-monetary policy mix, the expansionary fiscal balance or deficit and debt override the CBN's tight monetary policy stance and reduced spending, contributing to sustained economic growth. However, the loose monetary stance consequently generates higher domestic inflationary pressure. In conclusion, empirical evidence that the improved competitiveness of the economy was eroded by domestic price pressure due to the loose monetary regime and aided by an expansionary fiscal policy implemented through higher deficit financing. A main recommendation would be that policies for both stabilisation and growth objectives must align to have optimal outcomes.

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