

An investigation of financial management behaviour of administrators, budget slacks, and state-owned enterprises' performance in Nigeria

by

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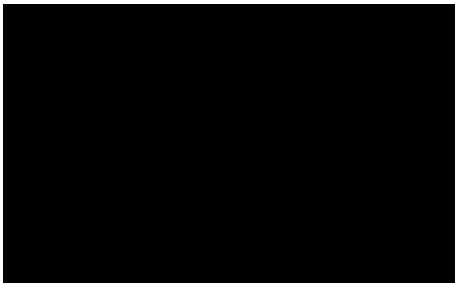
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Date: August 2023

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Omolayo Kayode declares that:

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- (ii) This thesis has not been submitted for any degree or examination at any other university.
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Signature: Date: August, 2023

DEDICATION

This research work is dedicated to the Glory of Almighty God and my late father, Mr James Ojo Omolayo.

ACKNOWLEDGEMENTS

Completing this research work was ultimately made possible through the support of Almighty God, the giver of life, wisdom, knowledge, and understanding. All glory be to His holy name. Secondly, I am indeed grateful to my supervisors, Prof Mabutho Sibanda and Dr Margret Odunayo Olarewaju, for their moral and academic support and contributions. My deep gratitude also goes to my immediate family for their tolerance, perseverance, and care throughout this programme. My late parents and siblings have also been of important support to my achievement academically, especially my elder brother Chief Niyi Ojo for being always there for me at all times. I say a big thank you to you all. In academia, I want to especially appreciate Dr Adeleke Omolade for his encouragement and moral and academic support at all times. I am indeed grateful to you, sir, for encouraging me to take up a PhD programme.

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ABSTRACT

The study investigates the financial management behaviour of administrators, budget slack adoption and performance of the State-Owned Enterprises of the Federal Government of Nigeria. A sample of 385 top administrators from all the existing 202 State-Owned Enterprises in various sectors at the federal level in Nigeria were selected and structured questionnaire was used to harvest information from them. They were analysed using multiple quantitative techniques ranging from factor and principal component analysis to weighted least square regression analysis, ordinal regression analysis, and logistics regression analysis, among others. The results show that about 47.3% of the administrators showed responsible financial management behaviours scale while about 52.7% reflected irresponsible financial management behaviour scale. Furthermore, Cash Management Sub-scale with coefficient of 0.1571282 is statistically significant at 5% level and thus, plays the most crucial role in developing the financial management behaviours scale, this is followed by socio-cultural beliefs scale. In another result, income, family size, financial knowledge, and financial literacy account for the largest variation in financial management behaviour of the administrators. Moreover, the result shows that the adoption of budget slack to a large extent does not significantly impact the financial management behaviour of the administrators. Optimism with coefficient of 0.5605328 and deliberative thinking with coefficient of 0.0880613 are the two factors that significantly impact budget slack adoption. A significant relationship was established between the financial management behaviour of the administrators and the State-Owned Enterprises' performance in the last objective. More importantly, it was revealed that the irresponsible financial management behaviours scale has a more significant adverse effect on the performance of State-Owned Enterprises. The general implication of the study is that the sociocultural beliefs sub-scale, which was not captured in any of the previous studies as a measure of financial management behaviour, proved to be a good measure in this part of the world. The study further shows that budget slack adoption effect on financial management behaviour is not significant. Finally, the implication from findings in the survey shows that irresponsible financial management behaviour of the administrators has a significant negative impact on the performance of the SOEs.

Key Words: State-Owned Enterprises, Financial Management behaviour Scale, Administrators, Budget Slack.

ABBREVIATIONS

| | |
|--------|---|
| CBN: | Central Bank of Nigeria |
| CMS: | Cash Management Sub-Scale |
| CRMS: | Credit Management Sub-scale |
| EFCC: | Economic and Financial Crimes Commission |
| FMBS: | Financial Management Behaviour Scale |
| FMB: | Financial Management Behaviour |
| GDP: | Gross Domestic Product |
| ICPC: | Independent CorruptPractices Commission |
| JA: | The analysis and results of the study's first objective |
| MDAs: | Ministries, Departments, and Agencies |
| NBS: | Nigeria Bureau of Statistics |
| NDIC: | Nigeria Deposit Insurance Company |
| NECO: | National Examination Council |
| NICON: | National Insurance Corporation of Nigeria |
| NITEL: | Nigerian Telecommunication Ltd |
| PHCN: | Power Holding of Nigeria |
| SE: | Standard Error |
| SCBMS: | Socio-Cultural Beliefs Management Subscale |
| SOEs: | State-Owned Enterprises |
| SSA: | Sub-Sahara Africa |
| TI: | Transparency International |
| VIF: | Variance Information Factor |
| WLS: | Weighted Least Square |

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CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO THE STUDY

Issues around the financial management behaviours of personnel in various originations, especially the State-Owned-Enterprises (SOEs) around the globe, have been occupying the front burner in management and finance research in recent times (Chuah, Kamaruddin, and Keshminder, 2020; Valaskova, Bartosova, and Kubala, 2019). At both global, regional and sub regional levels, the State-Owned-Enterprises (SOEs) are vital in any economy because these enterprises remain one of the most critical sources of Internally Generated Revenue (IGR) for the government (Lecy, 2018). However, their roles in contributing to the IGR of the government have been adversely affected by the prevalence of financial mismanagement in the sector (Odior and Alenoghena, 2017; Abdullahi and Mansor, 2018). From both global and regional perspectives, the discourse on curtailing financial mismanagement levels has revolved around two contending issues championed by two schools of thought. The first school of thought believes that the solution to this problem should focus on assessing personal attributes or characters regarding the financial management behaviour of individuals occupying particular administrative positions in these SOEs (Mien and Thao, 2015; Mathebula, 2016; Lecy, 2018). The second school of thought advocates the creation of systems in the organisation that will make financial mismanagement difficult even if an administrator tends to perpetrate financial fraud (Liantoand, Megawati, 2017; Hunjra, 2018). This debate has been on for some decades, and one of the central arguments of the first school of thought is that regardless of how stringent the design of a system is, an administrator with such a tendency will always want to look for loopholes to perpetrate financial fraud. Therefore, this group of scholars opines that assessment of the financial management behaviour of an individual in an administrative position is critical in curtailing the rising scale of financial mismanagement in most SOEs. In the long run, this will improve organisational performance.

From a different perspective, Mudzingiri, Mwamba, and Keyser (2018) see financial management behaviour as very abstract, and the perception or the measurability might be more subjective than objective. This throws another discourse entirely to the issue of financial management behaviour, and this remains one of the problems in tackling the menace since the attributes of financial

management behaviour vary hence measuring it becomes cumbersome. Although some authors such as Xiao and Dew (2013) and Mien and Thao (2015) have worked on this, there appears to be no consensus; hence, the issue of appropriate measures for financial management behaviour continues to resonate in financial research.

As part of the efforts aimed at curtailing financial management behaviours, some personnel, especially those in charge of financial decision-making in some organisations, are adopting a budget slack creation approach to checkmate their tendencies of perpetrating financial fraud (Rose and Smith 2014). In this regard, they either make their proposed personal expenditure more than the actual or their proposed revenue less than the actual. Either way, they create budget slack to work with, which in the long run will force them to operate within their limits of resources and prevent them from looting government funds (Herawati, 2017). However, according to Putra, Albab, and Swara (2019), contentious issues around the usage centre around some factors that can influence their applicability since they are initially designed for the budget preparation process in corporate organisations, hence their effect on the financial management behaviour of an individual remain unclear.

However, the performance of the SOEs is essential to any economy since they are significant players in revenue generation. Therefore, their successes partly depend on the prudent management of their limited resources, especially the appropriation of funds by top administrators and other stakeholders outside the organisation (Ansong and Gyensare, 2018; Birkenmier and Fu, 2019). Consequently, knowledge of prudent management of financial resources is one of the significant attributes of administrators with proper financial management behaviour (Szendrey and Fiala, 2018). Unfortunately, across the globe, there have been many cases of financial mismanagement in different countries. This contributes to the worsening status of many of these countries on corruption ranking. For instance, on the corruption index in 2019, Nigeria was ranked 144 among 180 sampled countries by Transparency International (TI) (2018) against 120 and 136 positions in 2010 and 2014, respectively.

Furthermore, the performance of the SOEs, which the decadence has compounded in the level of fund mismanagement in the SOEs, is more prominent at the federal level because that central government supervision is a bit far from the administrators (Abdullahi and Mansor, 2018)¹. With

¹<http://www.nigeriaembassyusa.org/index.php?page=parastatals>

about 200 federal government SOEs in Nigeria, the country has the most significant public sector in the Sub Sahara Africa SSA (Abdulrahman, 2019). The public sector in Nigeria renders public services as contained in section 277(91) of the Constitution of the Federal Republic of Nigeria of 1979 as amended in section 169 of the 1999 Constitution. Generally, according to the constitution, the division of the Nigerian public sector includes the civil service, mainly the Ministries, Departments, Agencies (MDAs), and State Owned Enterprises (SOEs). The government of federal, state or local government, judiciary and legislatures either partially or solely on these. It also involves the security agencies such as the police and the organisation of armed forces where the central or the federal government is the major shareholder. The federal SOEs are the focus of this study because, according to Imhonopi and Ugochukwu (2013), cases of fund mismanagement have been more prominent among them in recent times.

The gross inefficiency in the defunct Power Holding of Nigeria (PHCN) and Nigeria Telecommunication Limited NITEL, where about 34 billion nairas were misappropriated, remains green in people's memories (Imhonopi and Ugochukwu 2013). As of 2007, the contributions of NITEL to the GDP fell from 17% in the 80s to as low as 3% before it finally folded in 2008 (Nwoba and Monday 2018). In addition, most of the power plants in Nigeria under the management of PHCN were comatose before the unbundling of the agency in 2013 (Onochie, Egware, and Eyakwanor, 2015). All these inefficiencies in the SOEs result from their administrators' prevalence of financial mismanagement cases. According to Sorunke (2018), about 56 cases are still pending in the court of law on financial mismanagement of top federal government SOEs in Nigeria.

The financial mismanagement by the administrators of the Joint Admission Matriculation Board (JAMB) and National Examination Council (NECO), where a total of seven billion nairas were said to be missing from their treasuries, are still being prosecuted by the Economic and Financial Crimes Commissions (EFCC) in the court of law (Nwoba and Monday, 2018). All these cases, among others, attest to the large-scale financial fraud in the federal government SOEs in Nigeria.

In recent times, there have been improvements in the levels of application of technology to fund managers across the globe, and Nigeria also keyed into this. For instance, the Treasury Single Account (TSA) introduced in 2015 at the inception of this new administration in Nigeria is one of the technological innovations instituted by the Federal government of Nigeria to checkmate fund embezzlement since the system ensures a single treasury for all government SOEs. Although in

addition, some anti-graft agencies such as the Economic and Financial Crimes Commission (EFCC) and Independent Corrupt Practices Commissions (ICPC), among others, have also been established to curb financial mismanagement generally among citizens despite these steps, the levels of financial mismanagement have been growing unabatedly (Abdulrahman, 2019).

Administrators in the public service are critical to the organisation's performance because they play active roles in fund appropriation (Anyawu, 2020). However, on country base analysis, it has been ascertained that more than 65% of financial mismanagement-related corruption cases are traced to the public sectors of the Nigerian economy (Imhonopi and Ugochukwu, 2013). These alarming statistics make it imperative that the public sector administrators in Nigeria are culpable in the rising corruption cases in her public sector. According to Ijewere (2013), Adebayo and Ilesanmi (2020), some administrators' poor financial management behaviours, particularly in the SOEs, leave much to be desired as many live beyond their salaries at the expense of the organisation. Ezirim and Ojukwu (2016) maintained that the stupendous lifestyle and humongous affluence of many administrators in the SOEs across Nigeria have affected the management of these SOEs resulting in impaired performances over the years.

In conclusion, the background to this study has shown the prominence of the problem of financial mismanagement among the SOEs in Nigeria, with the administrators of these organisations at the centre. In addition, it has been identified in the first paragraph that the first school of thought on finding solutions to this problem suggests assessing and controlling the financial management behaviour of these administrators. However, some individuals have applied the budget slack creation approach to achieve this to manage financial management behaviours. Studies have shown that many people worldwide have been using this method; some operate it from the revenue angle, while some use it from the expenditure angle (Putra, Albab, and Swara, 2019). However, the level of usage of this approach among the administrators of the SOEs in Nigeria and its efficacy in controlling the financial management behaviour of the administrators are still unknown based on the available literature. It is believed that a reduction in the cases of financial mismanagement perpetrated by the administrators of these SOEs can go a long way to improving their performances.

1.2 PROBLEM STATEMENT

The rising cases of financial mismanagement among administrators of SOEs in Nigeria have continued to generate several concerns for both local and international agencies as they continue to affect the performances of the SOEs (Lee 2018; Laeeq, Shahzad, Ramalu, and Fareed, 2016). The structure of the SOEs in Nigeria, by default, has a decentralised leadership controlled by the board and the management with representatives from the six geo-political zones in the country (Odior and Alenoghena 2017). According to Idike, Ukeje, Iwuala, Onele, Ekwunife, Nwachukwu, and Meissner (2019), this decentralisation would prevent dictatorship and autocratic style of leadership that can aid the perpetuation of financial fraud. Notwithstanding, the extent of financial mismanagement in the sector, which is ultimately linked to the financial behaviour of top administrators in the SOEs, remains very worrisome.

The alarming cases of financial mismanagement among the SOEs prompted the civilian administration on assumption of power in the year 2000 to take drastic steps to checkmate this menace by promulgating various anti-graft laws and establishing some agencies to implement them. All of these are part of the efforts to control the financial management behaviours of administrators in the SOEs, which have been blamed for the rising cases of financial mismanagement in the sector (Laeq, Shahzad, Ramalu, and Fareed, 2016). Apart from this, efforts to reduce financial mismanagement have not been made easy due to the variation in the approaches to the concept, definition and measuring of financial management behaviour. Notwithstanding, various scales of measurement of the concept have emerged over the years, and the most acceptable one is the financial management behaviour scale developed by Xiao and Dew (2014). Many studies have applied this scale to compute the financial management behaviour of different individuals, but this is yet to be done for administrators in SOEs in Nigeria to the best of the researcher's knowledge.

Another problem associated with finding the solution to the menace of financial mismanagement in SOEs is the fact that the financial management behaviour of an individual is challenging to control, and it varies from one individual to another since different factors can account for changes in the financial management behaviour of an individual at a particular period time (Prihartono and Asandimitra 2018). Therefore, a blanket approach to checkmating financial mismanagement might seem inefficient. Consequently, determining factors that influence an individual's financial management behaviour has been adjudged to be important in finding the solution to the problem

of fund mismanagement among administrators in SOEs. However, literature on this has been limited to countries outside the SSA (see, for instance, Asandimitra and Kautsar, 2017 Prihartono and Asandimitra, 2018). The few in Nigeria are not on the SOEs, which is the focus of this study (Odior and Alenoghena, 2017; Mudzingiri, Mwamba, and Keyser, 2018).

Furthermore, the global situation shows that an individual's financial management behaviour can also be controlled using some personal efforts (Putra, Albab, and Swara, 2019). One of these is the creation of budget slacks. This is a common practice globally, but the effect on financial mismanagement behaviour remains a contentious issue (Rose and Smith, 2014; Valaskova, Bartosova, and Kubala, 2019; Putra, Albab, and Swara, 2019). In addition, there are some contentious issues relating to its application (Putra, Albab, and Swara, 2019). For example, according to Huang and Chen (2019), budget slacks are primarily designed to assist managers in meeting their organisations' targets during the budget preparation process. However, if an individual will use this to manage his financial behaviour Strömbäck, Lind, Skagerlund, Västfjäll, and Tinghög (2017) suggested that factors such as self-control, optimism, and deliberative thinking, among others, must be considered. However, from the literature, it appears that these factors had not been empirically investigated primarily on how they can determine administrators' usage of budget slacks.

However, since these administrators manage the operations and performance of these SOEs and take important decisions regarding fund appropriation, the extent to which their financial management behaviour affects the organisation's performance is also crucial (Mien and Thao 2015; Laeeq, Shahzad, Ramalu and Fareed, 2016). Therefore, the novelties of this study are diverse. To the best of the knowledge of the researcher, apart from the fact that this study will compute for the first time Financial Management Behaviour Scale (FMBS) for administrators in the SOEs in Nigeria, it will also identify factors that account for variations in the financial management behaviours of the administrators in the SOEs.

1.3 STUDY OBJECTIVES

The main objective of this study is to assess the relationship between the financial management behaviour of administrators, budget slack creation, and the performance of SOEs in Nigeria.

Furthermore, this study seeks to:

- (i) Develop a measure of financial management behaviour for SOE administrators in Nigeria.
- (ii) Assess some factors that determine the financial management behaviour of administrators in the SOEs in Nigeria.
- (iii) Investigate the moderating effect of the adoption of budget slack creation on the financial management behaviour of the administrators.
- (iv) Examine some factors that have influenced the usage of budget slacks among the administrators of SOEs in Nigeria.
- (v) Determine the effect of financial management behaviour on the performance of the SOEs.

1.4 RESEARCH QUESTIONS

This study seeks to answer the following questions.

- (i) How can the financial management behaviour of the administrators in SOEs in Nigeria be measured?
- (ii) Do we have some factors that determine the financial management behaviour of administrators in the SOEs in Nigeria?
- (iii) Does the adoption of budget slack creation have moderating effect on the financial management behaviour of the administrators?
- (iv) Do we have some factors influencing the usage or adoption of budget slacks among the administrators of SOEs in Nigeria?
- (v) How does financial management behaviour affect the performance of SOEs?

1.5 SIGNIFICANCE OF THE STUDY

This study is timely at this period when urgent attention is required to mitigate the worsening position of Nigeria on corruption ranking across the globe. Findings from this study are expected to show the nature of the financial management behaviour of administrators in the country's public service. TMG (2019) identified the public service in Nigeria as the most culpable sector where financial mismanagement is severely endemic. Therefore, the study will further throw more light on the extent of culpability in corruption cases relating to funds mismanagement by administrators in the SOEs of the country. Again, developing the Financial Management Behaviour Scale (FMBS) for the administrators in this study will serve as a means of conducting an on-the-spot

assessment of proposed administrators. These efforts will go a long way in making the screening efforts of the administrators responsible for funds appropriation in the SOEs of the country easier. In addition, one of the study's specific objectives is to examine the efficacy of budget slack in checkmating financial mismanagement and investigating its determinants. This issue has remained inconclusive for some years. Identifying factors that can influence the usage of budget slack will also go a long way to assist in examining the effect on the financial management behaviour of the administrators. The generalisation that fund mismanagement by administrators in the public service is mainly responsible for the moribund nature of many SOEs can further be put into empirical perspectives considering the findings of this study. Consequently, the analysis of the influence of the financial management behaviour of the administrators on the performance of SOEs is also germane.

In addition, as part of the significance of the study especially in the area of justification for this study, some original contribution of the body of knowledge are clearly identified. For instance, the development of financial management behaviour scale which has not been domesticated by any study in Africa is done in this study. More so, the assessment of the determinants of financial management behaviour has been limited in the past studies to students and in few studies households, focusing on the public servant by this study remains a germane contribution to knowledge. More importantly, arguments on the relationship between financial management behaviour and adoption of budget slack have remained discourse that appeared not have been empirically investigated thoroughly, this study among others attempts to delve empirically on this.

Generally, both local and international agencies from the discussions above will benefit from the findings of this study. In addition, agencies such as the TMG, anti-corruption agencies in the country, and stakeholders in government ministries and departments will find the research outputs from this study very beneficial.

1.6 SCOPE OF THE STUDY

The study's focus is primarily on Nigeria's public sector due to the indictment by Pring and Vrushi (2019) as one of the most corrupt sectors in the country. This indictment is very prominent among the federal government parastatals or SOEs. Consequently, government parastatals or state-owned enterprises (SOEs) which are commercialised to make a profit for the government are chosen for the study. But, more importantly, administrators in these selected state-owned enterprises are the

primary respondents since they are the officers in charge of fund appropriations in the organisation. In addition, Nigeria has about 200 federal government SOEs and employs 65% of the 1.2 million public servants in Nigeria, while the rest are used in ministries and departments, making it the most significant public sector in the whole SSA (NBS, 2019). Apart from the fact that these SOEs generate the highest figure regarding federal government IGR, they are bedevilled by various cases of funds mismanagement, as highlighted in the background of the study.

1.7 STRUCTURE OF THE THESIS/ORGANISATION OF THE STUDY

This thesis is divided into six chapters. Chapter one contains the introductory aspect of the study, where the background, statement of problem, objectives, research questions, the significance of the study, and the scope are all discussed. Chapter two explores the conceptual literature on financial management behaviour, the performance of SOEs in Nigeria, and the adoption of budget sacks. Chapter three of the thesis focuses on the theoretical and empirical literature related to the study. Chapter four is dedicated to the methodology. The chapter discusses the research design, population, sampling and sampling techniques, method of data collection and data analysis methods. The results and discussion on the empirical analysis of the data are included in chapter five. Results are presented, interpreted and discussed in this chapter. Chapter six is the last chapter of the thesis and contains the study's summary, conclusions and recommendations. In addition, chapter six also includes the contributions to knowledge and literature, and lastly, areas for further studies are also discussed under the chapter.

1.8 DEFINITION OF TERMS

Financial Management Behaviour (FMB): This is a term that describes the attitude of individual or entity toward administration of personal or an entity finance.

Financial Management Behaviour Scale (FMBS): This is a scale with which financial management behaviour of an individual is measured.

State Owned Enterprises (SOES): They are government owned agencies or parastatals saddled with the responsibilities of generating revenue for the government. These entities may be owned by federal, state or local government.

Budget Slack: It is a built-in cushion in a budget that seeks to increase the chances of the actual performance being better than the budget. There are two ways to accomplish budgetary slack: underestimate the amount of revenue or income to be generated or overestimate the amount of expenses that are to be incurred. In this study, budget slack is seen from the perspective of individual budget management.

Administrators: An individual saddled with the responsibility of managing administrative activities in an organization. Basically, an administrator oversees administrative duties in an organization.

Gross Domestic Product (GDP): This is the total value of goods and services produced in a country in a given period usually a year.

1.9 CONCLUSION

This chapter has discussed the background of the study, stated the problem and explained it. The objective of the study and the research questions have also been discussed. The chapter further discusses the study's justification and significance, where the relevance and the need for the study at this period were enumerated and expatiated. The scope of the study was also discussed in the chapter. The limitation to the coverage and the justification for such were explained under the scope of the study. In addition, the organisation of the study were also included in the chapter. That is, the structure of the thesis and what each of the chapters contains was explained in this section.

The next chapter discusses the literature review on the study and focuses more on the conceptual aspect of using the Nigerian experience.

CHAPTER TWO

OVERVIEW OF FINANCIAL MANAGEMENT BEHAVIOUR AND SOE'S PERFORMANCE IN NIGERIA

2.1 INTRODUCTION

This section of the thesis discusses issues relating to financial management behaviour and practice among administrators or workers in the Nigerian public sector, with a particular focus on government parastatals or state-owned enterprises. The method of budget slack creation among the top administrators and the effects of all these on the performance of the Nigerian public sector generally will also be discussed in this chapter. The discussion begins with a description of the entire public sector in Nigeria.

2.2 OVERVIEW OF THE NIGERIAN PUBLIC SECTOR

The public sector in Nigeria renders public services as contained in section 277(91) of the Constitution of the Federal Republic of Nigeria of 1979 as amended in section 169 of the 1999 Constitution. Generally, according to the constitution, the division of the Nigerian public sector includes the civil service, which is mainly the Ministries, Departments and Agencies (MDAs), The Public Enterprises (State-Owned Enterprises) (SOEs) or the parastatals, education institutions, judiciary and legislatures which the government of central, states or local government either partially or solely owns. According to Inuwa, Ononiwu, Kah, and Quaye (2019), it also involves the security agencies such as police and armed forces organisations where the Central or Federal Government is the major shareholder. The government bureaucracy is entrenched in the public sector via the public service they render. Most of the public sectors are service-oriented in Nigeria.

Nigeria's public service background emanated from the unified service created by Governor General Fredrick Lugard during the colonial era. The setup of the public service then was dominated by the colonial masters, who were mainly Europeans: However, the traditional rulers were included at the lower level of command. The origin of the Nigerian Public Sector is traceable to the colonial epoch when the Governor General, Fredrick Lugard, created a unified service. This is the foundation of the indirect rule, which used traditional rulers regarded as the spiritual and political leaders then (Craggs and Neate, 2017). This public service system was prominent mainly in the Western and Northern regions of the country. The situation culminated in the establishment

of three civil services to support the federal public service in 1954. The structure of the civil service colonial masters established formed the basis of the development of policies for the indolence of the country in 1960. In the future, the incaution of the military into politics led to the emergence of the bureaucrats as the major players' in governance because they have more expertise in administration than the military. The role of the public sector became more evident during the formulation of the development plans for Nigeria at independence. According to Okudoloand Meko (2020), during this period, the Super permanent secretaries emerged as the highest bureaucrats controlling the public service under the Gowon administration. Later, the oil boom came into the picture in the 70s and led to the replacement of the regions with the creation of 12 states in 1967. This increased to 19 in 1976 and 21 in 1987. It rose to 30 in 1991 and 36 in 1996, including the Federal Capital Territory(FCT).

Since this period, the Federal Civil Service has witnessed tremendous growth in consonance with the levels of economic development and expansion in Nigeria. Moreover, according to Colonnelli, Prem, and Teso (2020), the emergence of the formulation of the indigenization policy in 1972 gave more responsibilities to the public service to play more roles in the indigenization process as enshrined under the Nigerian Enterprise Promotion Decree then. Generally, the concept behind the civil services was to participate actively in the formulation of policies for the government, come up with development plans and a procedure for the implementation of the plans, preparation of annual budgets, collection of revenues, which are mainly taxes, duties, and fines, making of the bye-laws and formulation rules and regulations of governance, performing some quasi-judicial functions. The parliamentary decrees supported all these activities.

Generally, Nigeria's public service has certain divisions, namely: The Civil Service: This includes career officers of the ministers, the extra ministerial departments, the Judiciary, the Presidency, and the National Assembly. The security agencies such as the Police and the Armed Forces. It also includes the Para-Military outfits and other relevant security agencies. The Parastatals, State-Owned Enterprises (SOEs), or Public Enterprises.

2.2.1 Functions of the Public Sector in Nigeria

The public sector's (Ministries, Departments, and Agencies) primary function is in the implementation and execution of the government's development plans, goals, and objectives. The pivot of African Economic growth is the public sector. The sector is responsible for providing an

enabling environment for all sectors of the economy to have optimal performances (Adebayo and Ilesanmi, 2020). In addition, the policy on which all sectors operate in the economy is provided by the public sector.

In summary, the functions include implementation and enforcement of socio-economic and political policies of the state or government, formulation and implementation of public service generating income or revenue for the state or government, enforcement of rules to ensure probity and accountability in finance, managerial and political endeavours of office holders, providing essential service to people, and performing monitoring and evaluation tasks for originations of the states and privates. These are rendered on behalf of the government, initiating development plans and driving the same provision of other essential services that encompass water, transportation, electricity and education, among others. Thus, the public sector participates actively in general nation-building and cannot be left out.

2.3 MEANING OF PARASTATALS OR PUBLIC ENTERPRISES

According to Amakiri and Luke (2015), parastatals are the arms of the government that are operational. They are also established to provide services and generate income or profit for the government. Their functions are crucial to the government, thus warranting the creation of these entities outside the regular government operational segments. They are created outside the civil services with rigid demand for accountability and a considerable level of autonomy. The autonomy granted is under the oversight function of the government to guarantee accountability.

The development of the parastatals emanated from the short-falling oil revenue in the 70s. This spurred the government or created another entity that would serve as revenue-generating for the government (Anyanwu, 2019). This is the beginning of the participation of the public sector in active economic development plans for the government. The parastatals took the government's public sector to another dimension, different from formulating and developing policies to carry out essential revenue generation duties through activities that may include production and manufacturing. The entrepreneurial functions of the government manifested in the second National Development Plan of 1970 to 1974 and amended in the Third National Development Plan of 1975 to 1980. At this point, the government became a massive player in the economy's real sector, contributing huge investments to social and economic infrastructures (Obadan, 2001). The government's activities in producing and providing services that generated income became more

pronounced with the establishment of the parastatals. At this juncture, their role changed from just stimulation and acceleration of national economic development plans to direct participation in the operating units of the economy with heavy interventions in the form of investment in the real sector of the economy.

Based on the preceding, Saidu, Jugu, Ogenyi, and Bodunde (2020) stated that public enterprises were established in hotel and hospitality, transportation, banking and insurance, railway services, and oil exploration. Initially, these activities were lumped into the civil service, but with the parastatals, they were given autonomy to operate and generate income for the government. Furthermore, activities that require heavy investment, which might be difficult for private entities to venture into due to financial constraints, were taken up by the government with the sole aim of generating revenue for the government. These sets of the process led to the emergence of government parastatals such as the Nigerian Electricity Power Authority (NEPA), which later changed to the Power Holding Company of Nigeria (PHCN), Nigerian National Petroleum Corporation (NNPC), Nigerian Security Printing and Minting Company (NSPMC), Defense Industry Corporation (DIC), the Nigeria Liquefied Natural Gas (NLNG), among others.

Again, Kayode (2020) explained that business enterprises also came on board, including the Nigerian National Supplies Company (NNSC), some agencies that were created to actively participate in trading to protect consumers from the exploitations of the private sector. The establishment of these ventures created an avenue for the government to earn income in the development process of the economy. The sole owner of the Central Bank of Nigeria (CBN), the Nigeria Deposit Insurance Company (NDIC), the National Insurance Corporation of Nigeria (NICON) and the Ministry of Finance Incorporated was to enable the government to control the economic activities toward the National objectives and goals of the country.

Notwithstanding, the prevalence of these State Owned Enterprises or parastatals has continued to generate concerns due to their inefficiencies, leading to some drags in the economic growth of developing countries, including Nigeria. The incessant high levels of corruption in the entities called the SOEs, which have led to poor profit generation, low turnovers, and poor service deliveries, have caused many setbacks in Nigeria's economy. According to Saidu, Jugu, Ogenyi, and Bodunde (2020), many parastatals in Nigeria have failed to justify the government's massive

investment in them. This has led to many of them being comatose today. Their performance summarizes that the SOEs appear not to justify the overstretching of the countries' natural resources and infrastructures committed to them each year by the Nigerian government. According to Hezekiah, Adeniji, and JO (2019), there are approximately 1500 parastatals in Nigeria. The Federal Government controls over 500 while the rest are under the 36 states. He further noted that these enterprises had gulped nearly half the \$300bn the country earned from oil since 1973. In addition, these parastatals have continued to consume annual subsidies, waiver of imports, and direct payments worth \$2bn from the state coffers that are almost dried up.

According to Akinyemi, Alege, Ajayi, Adediran, and Urhie (2017), around the mid-70s, the populace started realising that the participation of government in the economy through the SOEs was no longer yielding commensurate profit or income to the government hence they advocated for the privatization of all the entire government enterprises in Nigeria.

In addition, Kodilinye (2019) posited that the government parastatals were not fulfilling their mandate in any way to the government as they have been completely ravaged by inefficiencies and poor service delivery, which has led to dwindling turnover over the years. Wallis (2018) also noted that the public enterprises in Nigeria long deviated from their original purpose of driving Nigerian industrial growth, providing employment, and rendering services that are considerably cheap to the public, Osibanjo, Gberevbie, Adeniji, and Oludayo (2015) berated the River Basin Authorities in Nigeria for their inefficiencies. According to them, River Basin Authorities as public enterprises recorded some encouraging feats at inception in 1970. However, as time progressed, the establishment became one of Nigeria's least-performing government parastatals due to gross mismanagement and inefficiency, making the entity a shadow of itself today.

According to Omolade, Nwosa and Amassoma (2019), another typical example of public enterprise inefficiency manifested in the Nigerian power generation outfit (PHCN), which has now been unbundled. This agency is currently generating between 2400 and 4000 MGW of electricity for about 200 million Nigerians, while a similar enterprise in South Africa, ESKOM, produces about 50000MGW for a population of less than 60 million. Furthermore, Nigeria Telecommunication Limited (NITEL) 's inefficiency led to the entity's scrapping and replacing it with GSM services across the nation. All the problems associated with the inefficiencies in the

public enterprises in Nigeria led to the establishment of a group of intellectuals to find a solution to the problem. Onosode and Al-Hakim headed the group with the significant task of assessing the performances of the Nigerian government parastatals and coming up with workable solutions that will chart a new course for the entities.

According to the findings of Onosode and Al-Hakim's group in 2012, the following problems were identified: The inadequate and defective capital structure of many organisations, White Elephant investment led to wasteful resources and assets, Corruption, discipline and nepotism, Bureaucracy in the operationalisation of services rendered by the entities, Political interference and inducements, Gross abuse of monopolistic power at the expense of the populace they are supposed to serve and protect, Poor quality of service and inefficient service delivery.

2.3.1 Functions of government parastatals

The functions of government parastatals are contained in the publication of Anyanwu (2020) who took his claims from Friedman's hypothesis. According to him, public enterprises are mainly established for the following reasons. Provision of a nucleus for the country's general economic expansion without the constraints associated with private entities, Involvement in activities that are primarily not attractive to the private but essential, Areas of investments that require colossal capital might not look attractive to the private sector. In this area, public enterprise comes in with massive capital to benefit the populace and make a considerable profit for the government in return.

According to Junaidu Bello Marshall and Esq (2015), establishing public enterprise is essential for the economy and defence. In many developing countries like Nigeria, many public firms are major players in Nigeria's defence and have contributed much to the national income of Nigeria.

Regarding market share, government parastatals constitute a considerable percentage. This is an indication for the government to dictate the market's pace and utilise this to achieve the national objective and goals. With a vast market share, policies and regulations of the government are implemented efficiently. From the view of Treves (2018), the government's intervention in the economy via the establishment of parastatals or public enterprises has led to the breaking of some private monopolies that have been exploiting society. In addition, better implementation of fiscal policy is made possible with the establishment of public enterprises.

Junaidu Bello Marshall and Esq (2015) generally adduced some reasons behind the growth of public enterprises across the world: ideological, developmental, political, employment generation, protection of consumers, and the distribution of national income more equitably. However, some enterprises are sensitive and can only be managed by government entities. These include security and essential services. Government parastatals are established to work and provide such services. According to Victoria, Umoh, and Amah (2018), public enterprises are set to participate in the general economic activities of the country. While some statutory corporations are essential for social services, others are primarily commercial, generally operating like private corporations.

2.3.2 A review of performance and accountability in government parastatals in Nigeria

Oyebamiji (2018) stated that discussing the nature and structure of the Nigerian economy comes first when the accountability and performance of government parastatals are to be reviewed. Nigeria remains a significant oil producer in the World, occupying the sixth position in the ranking of oil producers worldwide. However, the only point that could be drawn from this is the likelihood of poor service delivery among many government agents, including the government parastatals.

The poor service delivery, which has been adjudged as the bane of the Nigerian public sector, generally manifests itself in the lack of accountability among the administrators of the government parastatals in Nigeria. The myriads of abandoned and uncompleted projects polluting the Nigerian physical environment since the first republic are all evidence to show a lack of accountability and that all is not well with the Nigerian public sector. According to Onuorah and Appah (2014), this explains the reason why a country with such an abundance of oil resources is operating with four refineries that are producing grossly less than 10% of installed capacity and still relying heavily on the importation of refined oil despite the abundance of crude oil in the country. In addition, the steel and iron sector cannot be exempted from the financial recklessness of government parastatals as the two frontline steel companies the government cannot even produce up to 10% of the domestic iron needs of the domestic economy.

From the survey by Mas'ud et al. (2015), Nigeria has the largest bitumen deposit in the World. Yet, the country has not begun exploration of these abundant resources despite having parastatals that are saddled with the responsibilities of exploring available natural resources in the country. The Nigerian industry and Mines Corporation have been on this exploration for years without

success, and billions of dollars are spent annually to import bitumen from abroad (Osakwe, 2014). All these are a pointer toward poor accountability and evidence of lacklustre performance by government parastatals in Nigeria. At 60 years, it is believed that Nigeria should have institutionalised accountability to ensure good performance among the parastatals. However, it is quite unfortunate that the public sector is generally bedevilled by myriads of poor service delivery and incompetence among the administrators, and this has slowed the sector's performance over the years. The implication is that the leaders are not accountable to the people (Okekeocha, 2013). Furthermore, Nigeria is blessed with a lot of natural resources, but the management of these resource by various government agencies have led to misuse and underutilisation of these resources resulting in the overall underperformance of the agencies (Okekeocha, 2013).

The Nigerian government has made several attempts to improve the performance of the government parastatals, but the recklessness of many administrators charged with managing these establishments has left much to desire. The fallout from the public service reform carried out by the Udoji Committee in 1982 to achieve the objectives of the organisations recommended: a unified grading system, replacement of permanent secretaries with director generals, and planned and serious preventive management of processes.

Despite all these recommendations, the review of the performance of the Nigeria parastatals and the entire public sector still showed the decay in several sectors as a result of poor accountability and financial mismanagement on the part of the administrators saddled with the responsibilities of managing these establishments (Junaidu Bello Marshall and Esq, 2015). The general public has seen public service as an avenue to enrich oneself and families. This has led to a series of inefficiencies in the Nigerian government parastatals, often manifested through poor service deliveries and the incompetence of the public officeholders (Oyebamiji, 2018). The poor performance has led to many socioeconomic problems like chronic poverty, severe income inequalities, pervasive poverty, and deprivations, among others (Junaidu Bello Marshall and Esq, 2015).

2.4 FINANCIAL MISMANAGEMENT IN NIGERIAN GOVERNMENT PARASTATALS

Financial mismanagement is a form of fund misappropriation regarded as deliberate misuse. The abuse of money is a situation where money is used for what is not initially intended. In most cases,

such actions are taken to enrich the personal pockets of the perpetrators. This form of fund misappropriation is the most common among parastatal government officials in Nigeria (Ugoani, 2017).

The following ways are identified by Ugoani (2017) as areas of committing financial mismanagement: Usage of government assets for individual or personal utilization, The reward of work done for non-staff, Payment for not actual purchase and contract, Payment made for goods not returned, Teaming and landing, Influence of any form of self-profit, Inflating the price of a contract, Diversion of public funds into individual use, Diversion of office imprest to individual allowance, Non-approval of government money or property, Payment made for cheques that are yet to be cleared, To receive the gratuity and pension benefits of deceased staff, Wrong usage of medical allowance and reimbursement, Financial mismanagement, Larceny, Reducing costs and influencing financial records for individual needs is part of cheque mismanagement and fraudulent behaviour.

Rafindadiand Ogidan (2018) stated that the effect of financial mismanagement always negatively impacts the performance of both the private and public sectors. In an organisation, most cases of fraud have an economic impact. Consequently, this may lead to a loss of capital for the organisation. In addition, it also leads to a reduction in the revenue generation capacity and poor service delivery, among others. According to Ugoani (2017), to accomplish some stated aims, Public Sector Financial Management (PSFM) deals with the control of the expenditure of the government, revenue generation, borrowing, public debt, foreign reserves, foreign exchange system, liquidity level in economy and auditing of income and expenditure. Public funds as part of financial management, saddled with the control of general activities- can be understood on how government generates its revenue, records, restrict and give details of expenditure. Similarly, funds from public sector revenue control income and expenditure.

According to Enofe, Afiangbe, and Agha (2017), the biggest investor, the largest borrower, the most significant employer of resources, and the biggest buyer always come from the public sector. Therefore, public sector expenditure has always been a large business, and many as affirmed (Rafindadiand Ogidan, 2018). Against this backdrop, it implies that the amount of losses through financial misappropriation in the government is significant. According to Sa'eed, Gambo, Inuwa, and Musonda (2020) and Anyanwu (2021), the government is made up of (Federal, State, and Local Governments), all public cooperation, and other units that render government commodities

(goods and services) among the tiers of government, that is Federal, State, and Local Government Government comprises (Ministries, Departments, and Agencies) and public cooperation. From the belief of Junaidu Bello Marshall and Esq (2015), the public collaboration consists of the Central Bank of Nigeria (CBN), the Securities and Exchange Commission (SEC), the Power Holding Company of Nigeria (PHCN), the Nigerian Ports Authority (NPA), the National Communication Commission (NCC), the Nigerian National Petroleum Corporation (NNPC) and the Nigerian Maritime Agency and Safety Administration (NIMASA), among others (Federal Government of Nigeria (FGN), 2014). There have always been cases of corruption in government, such as non-existing workers on the payroll of MDAs, fraud, and, in most cases setting ablaze some sensitive documents.

According to Ugoani (2017), there is a negative result on growth and development due to the enormous amount of funds lost through financial misappropriation in government, which has led to the waste of the nation's resources. In one way or another, MDAs are involved in financial mismanagement rampant among government parastatals (Mas'ud et al., 2015). The increase in the cases of financial misappropriation and money laundering in Nigeria, particularly in government parastatals, calls for serious attention as carried out in separate studies (Enofe, Afiangbe, and Agha, 2017; Rafindadi and Ogidan, 2018). As a result, Nigeria has been adjudged the 33rd most corrupt nation out of 177 countries (Transparency International, 2013). Similarly, Nigeria was ranked 144th in the group's Corruption Perception Index in 2013. The two former Governors of the Central Bank of Nigeria, Professor Charles Soludo and Mallam Sanusi Lamido Sanusi, had made many accusations of fraud cases and indiscipline regarding fiscal governance against the last regime headed by President Goodluck Jonathan. Both Lamido and Soludo accused the federal government of missing oil revenue. The former accused stated that \$20 million was missing, while the latter alleged that the former Minister of Finance, Dr Ngozi Okonjo-Iweala, did not remit N30 trillion of oil money (Rafindadi and Ogidan, 2018). In the same way, \$700 million was discovered in the former Minister of Petroleum, Mrs Diaziane Allison-Madueke's house, yet, the past regime did nothing.

2.5 PUBLIC SECTOR FINANCIAL MANAGEMENT AND OUTPUT GROWTH

The relationship between government expenditure and economic growth is difficult to understand in theory. Mintz (2015) has argued that for any modern life, law and order must be a sine-qua-non

supplied by the public sector. He explained that life without the public sector was "nasty, brutish, and short" in 1651. In the opinion of Hobbes, economic growth could be promoted through particular roles of the public sector, such as the operation of a court system to settle quarrels and the protection of individuals and their property. Also, from another perspective, it can be promoted through secure property rights, contract enforcement, the smooth running of a market economy, and a steady monetary regime. There is an agreement in the literature that any accomplished development process is targeted to achieve high employment, sustainable economic growth, price stability, a protracted balance of payments, and external equilibrium. In addition, there must be enough effective government financial management.

Chimezie, Omarkhanlen, and Eriabie (2020) expatiate on Africa's issues, lessons, and future directions in government reform. According to them, to execute developmental goals and objectives, public service serves as the available instrument for the governments of African countries. Therefore, it is seen as important to the growth and development of the economies of Africa. In the study, the nature of the current reformation of government in Africa, lessons from international and African perspectives, and the future direction of government in Africa have been extensively looked into. They argued that the reform is not targeted at increasing autonomous development required for economic progress but in the interest of conservative international financial institutions in globalizing the neo-liberal economic orthodoxy for the welfare of powerful global capital. In their conclusion, effective government reform, behavioural patterns, the social context, and cultural people's milieu must be considered a vehicle of the reform to whom the reform is targeted. Abdulrahman (2019) submitted that to meet the macroeconomic target, the main tools are fiscal and monetary policy. The primary fiscal tools are government outflows and inflows (revenue), while monetary tools consist of reserve requirements, discount rates, and open market operations. However, there have been divergent opinions on the relationship between fiscal policy measures and economic activities.

This argument is unconnected with the theoretical position of the different schools of thought, such as the Keynesian and Neoclassical schools of thought in a growth-oriented economy. The importance of stabilization policy (fiscal and monetary policy) cannot be overstressed. There has been attention to growth and poverty in Nigeria (Chimezie, Omarkhanlen, and Eriabie, 2020). In the same way, previous research on Nigeria depended on a partial framework. Chimezie,

Omankhanlen, and Eriabie (2020) further stated that the various productive sector and income groups had not felt the impact of different fiscal policies. In Nigeria, most research work concentrates on poverty profiles. As a result of this, an investigation of the effect of growth on inequality has been done by many researchers. However, growth, inequality, and poverty can affect fiscal policy, which can be deducted directly from the literature merge.

Nigeria is an underdeveloped country. The degree to which economic variables such as population growth, urbanisation, and taxation influence the size of government spending was examined (Abdulrahman, 2019). It was decided that a change in the public funds is a responsibility of inflation that serves as a vital variable. Saddiq and Bakar (2019) elaborately examined the effect of government spending on the GDP. A comparative analysis of selected countries was made, deduced that some factors (macroeconomic variables) and changes in government spending have a significant relationship. The economic policies for a balanced economy should be adopted to balance the marginal productivity of public sector investment with that of private investment under normal conditions. The fact states that the balance condition in determining the national income implies resources used in public sector investment which must be achieved against any other resources used. The equality of public sector investment and nominal interest rate is an implication of the acceptability of private investment (Sa'eed, Gambo, Inuwa, and Musonda, 2020). Ugoani (2017) stated that government funds in underdeveloped economies include the system of using limited resources of the nation in a way that poverty reduction can be accomplished.

According to Chimezie, Omankhanlen, and Eriabie (2020), the theories of public choice are the basis of the changes and moving forward with ideas employed in the public sector. These include “total quality management” and “managing for results” (Mintz, 2015, pg 35). Furthermore, including words of encouragement like “What gets measured, gets done,” and the government’s orientation such as “new public management” and related formulations (Saddiq and Bakar, 2019). Abdulrahman (2019), in his practical method, states that incremental or line item budgeting type continues since its demerits are equal to its goodness. For instance, traditional budgeting proposes future income and expenditure as a result of past performance and is equally easy to understand since the future possibility is uncertain.

On the contrary, Enofe, Afiangbe, and Agha (2017) highlight three initiatives of the government spending management method, namely (i) fiscal discipline, (ii) allocation of resources consistent with policy priorities, and (iii) good operational management. Fiscal discipline implies the control of deficits and management of expenditures. However, developed countries equally find it difficult to achieve anything based on these shortcomings as a result of many “tragedies of the commons”, such as political office holders usually finance their expenditure through borrowing, which will be paid by the unborn generation and equally centred on the remaining in power by keeping the rights of citizens. In underdeveloped countries, the shortcoming is more pronounced, where political office holders and senior civil servants usually gain through funding political support.

Furthermore, Abdulrahman (2019) explained that instead of investing in income-generating assets for the unborn generation, some countries use their excess from high resource prices, such as oil, to finance consumption due to fiscal indiscipline in addition to deficit spending. Sub-Saharan African countries’ Regional Economic Outlook showed that countries with better budget systems are likely to have fewer fiscal risks, and there is a likelihood for countries with fewer fiscal risks to have faster growth. But the causality is asymmetric. That is, fiscal risks are positively related to real output growth and negatively affect real output growth.

Stevens, Saddiq and Bakar (2019) recently examined Stocktaking Reforms in Public Financial Management. To investigate Public Sector Financial Management performance in Nigeria from 1999 to 2007, they used Global Standard and the Public Expenditure and Financial Accountability (PEFA) framework. Stevens and Saddiq, and Bakar (2019) further stated that to develop a joint framework that has 28 high-level Performance Indicators, PEFA came as an outcome of the collaborative effort of the EU, IMF, and World Bank, each step taken to standardise the country’s and the public sector’s performance in a government fund. The PEFA examination showed a method-wide upgrade in Nigeria’s Public Sector Financial Management (PFM) system. Osakwe (2011) emphasised that since corporate growth and viability in the management style, Nigeria’s Local government administrators should borrow from their private sector colleagues. The local government’s money should be judiciously utilised for its growth and development. However, the fiscal policy performance showed that Nigeria’s condition is far from reality in the critical diagnostics of selected macroeconomic indicators. The worst scenario is that the budget deficits in

Nigeria are rarely in line with these tenets. The level of economic growth (proxy by GDP growth rate) as it appeared in ever-increasing public spending performance, which is not productive, showed a negative result between 1981, 1985, and 1987 and an average of 2.6 per cent over the period under review (1981-2004).

The inflationary trends of two digits for 17 years out of 25 years under review showed a high level of instability which was so pronounced. In a nutshell, Nigeria's fiscal policy behaviour has followed unstable trends, examining the importance of the policy; therefore, as the country strives to accomplish millennium development goals, sustainable economic growth is essential. Akujuobi and Nwezeaku (2015) examine the relationship between government funds and the economic growth of the Ghanaian and Nigerian economies. The study showed a highly significant causality between government funds and the sustainable development of the two countries.

2.5.1 Types of Financial Fraud

Diverse types of financial fraud have been identified in the literature. Some of them are reviewed in this section.

2.5.1.1 Employee theft

According to Karpoff (2020), money is the mainstay of embezzlers, resulting in about 70% of asset mismanagement all over the globe. It is believed that most money is carted away by total cash larceny and skimming. However, most of them are done via more expanded cash distribution schemes or systems such as manipulation of billing of payroll system, repayment, alteration of cheques, and fabrication of expenses. The Association of Certified Fraud Examiners (ACFE) (2012) reports larceny, skimming, and expanded money distribution as misappropriated stolen money.

2.5.1.2. Management theft

From the view of Akujuobi and Nwezeaku (2015), the management involved in financial illegality is a result of bypassing the measure put in place by them to guide against stealing, which they eventually get engaged in. It is not easy to discover this stealing. Management stealing is challenging to find in corporate organisations because of its penetrating kind of illegality. Karpoff's

(2020) opinion is that the impact of management wrongdoing can set a bad precedence for the workers and negatively impact the company's image to the downtrodden.

2.5.1.3. Corporate fraud

According to Zhang, Wang, and Kong (2020), the people found culpable of this financial illegality are the top echelon of the organisation's management. Zhang, Wang, and Kong (2020) further stated that different types of this misappropriation comprise tax evasion, anti-trust violation, false advertising, securities fraud, environmental crimes, the production of unsafe products, and financial statement fraud. Corporate misappropriation against the organisation denies the organisation of its asset when the financial statement is hidden and misinterpreted by the top echelon of the management. In a way to enhance income, therefore, financial statement misappropriation is involved. As the stock price goes up, so also is income.

2.5.1.4. Money Laundering

From the perspective of Gam, Gupta, Im, and Shin (2021), there is hidden financial illegality in the flow of money. It portrays the illicit flow of funds globally. The victim could also be a corporate firm or company. According to Prohibition Act (2004) (Money Laundering Act), there is a necessary punishment for money laundering violations, and many conditions forbid the act of laundering and gains from criminal activity. Money payment that is more than N500,000 or equal to it in the case of a person, and N2,000,000.00 or equal to it in the case of an organisation, will neither be made nor accepted by an individual or organisation except that transaction is carried out by a financial institution based on the provision of Money Laundering Act.

In the case of a public enterprise, all transfers of money or securities either in and out of another country of more than US\$10,000 or its match in naira should be detailed to the Central Bank of Nigeria (CBN) or the Securities and Exchange Commission (SEC). In addition, the utmost recipient of the transfer other than the first recipient must include the kind of transfer, the amount of transfer, and names and addresses of the sender and receiver of the money or securities transferred, which is made compulsory to report all fund transfers either in or out of the country.

2.5.2 Effect of Financial Fraud on Nigeria's Economy

According to Anyanwu (2019), the following are some of the impacts of financial misappropriation on the economy of Nigeria.

2.5.2.1 Microeconomic effect

Some fictitious companies are created and used by money launders. These companies are indifferent but behave as if they are taking part. Usually, the companies are not into a genuine business. The money realised from such an organisation is not necessarily from the business but from their illegal activities. The real business shuts down whenever competing with these fictitious companies because the latter gives goods and services at a lesser price below the cost price, subjecting the former to undue competition, and their resolution is not necessarily based on economic reasons.

2.5.2.2. Macroeconomic effect

The impacts of financial misappropriation on the macroeconomic scene are many and could be disastrous. Anyanwu (2019) further stated that these comprise unstable exchange rates and rates of interest as a result of the unexpected transfer of money, a decrease in the price of the asset as a result of the nature of money laundering, unfair distribution of resources in comparative asset commodity price emanating from activities of laundering of the fund, loss of trust in markets caused by in-house trading, financial misappropriation, etc. High cost to businesses, therefore, leads to lesser profit/gains, making it uneasy for the company to break even. Another non-direct economic impact is the higher insurance premiums for a business that makes a factual claim. According to Zhang, Wang, and Kong (2020), money laundering can infiltrate the world financial system and change economic data.

2.6 FINANCIAL MANAGEMENT BEHAVIOUR OF ADMINISTRATORS AND PERFORMANCE OF GOVERNMENT PARASTATALS IN NIGERIA

According to Adebayo and Ilesanmi (2020) and Ugoani (2017), one of the most grievous challenges facing the Nigerian public sector, especially the parastatals, is financial mismanagement and lack of accountability. Quite a several factors are responsible for the inefficiencies in the parastatals. Firstly, the administrators at the helm of the affairs in these establishments are laden with corrupt practices. Secondly, the administrative measures and regulations are fraught with inadequacies that can ensure accountability, preventing financial mismanagement in this establishment. Since the post-independence era, Nigeria has been grappling with corruption cases in every sector of the economy. The public sector in 1966 was adjudged to be the most corrupt sector in Nigeria, which has remained with it to date (Adebayo

and Ilesanmi, 2020). When the military took over the reins in Nigeria in 1966, financial mismanagement and corruption generally in the public service were cited as the main reason for their actions then. Despite this, successive military administration has been showing worse performance regarding corruption than their predecessors.

Akinyemi, Alege, Ajayi, Adediran, and Urhie (2017) explained that successive military administration in Nigeria was usually known for high-handedness, corruption, non-transparent activities, financial mismanagement and recklessness, and lack of checks and balances, among others. During this period, the administrators in the government parastatals were appointed without fear of accountability from the people. As a result, corruption continued to fester unabated under the military regime.

According to Adebayo and Ilesanmi (2020), there were no government agencies to ensure accountability or prevent corruption during these periods. Consequently, the public officials, especially the Nigerian public sector administrators and government parastatals in particular, took advantage to perpetrate enormous financial mismanagement leading to trillions of naira. Many of these funds are stashed in different accounts abroad, and Nigeria is still struggling till date to recover all the looted funds by these administrators (Hezekiah, Adeniji, and JO, 2019). The performance of the government parastatals in Nigeria became worse even after the civilian took over the leadership in Nigeria in 1999. Political alienation became the ticket to embezzling money in Nigeria. Many government agencies are ridden with financial recklessness, money laundering, and nepotism. In 2006, the Nigerian police force was adjudged to be Nigeria's most corrupt government agency. The inspector general of the police then was charged with corruption and fund embezzlement, running to about 100 million USD. He only spent six months in jail, and he was released. This created a lack of trust in Nigeria's public officeholders and law enforcement agencies. The mindset of the people at this period was that people saddled with the responsibilities of nabbing the criminals who were perpetrating financial frauds were even guiltier than the criminals in the offence.

The administrators usually sit on preparing the budget and allocating resources to various sectors. Most times, these come with huge expenditures with the mindset of executing capital projects. As a result, a colossal amount of budget expenditures find their way into most administrators' pockets

without any hindrance. According to Adebayo and Ilesanmi (2020), the most damning effect of this financial recklessness is evident in the poor service delivery, which should prompt the stakeholders to call for accountability. However, the top administrators in the underperforming parastatals quickly offer bribes to law enforcement agencies to cover their financial mismanagement. Law enforcement agencies see this as an opportunity to make financial gains; hence they collect these bribes unrestrictedly.

The country's overall economic performance results from all these nefarious, corrupt acts perpetrated by public officeholders. In addition, poor service delivery has led to the enormous infrastructural gaps currently being experienced in Nigeria. According to the World Bank (2017), Nigeria will need about 3 trillion nairas annually to fix its huge infrastructural gaps for the next ten years. No thanks to the financial behaviour of the administrators, which has rendered the public sector generally in Nigeria useless and docile in performing their core functions, and the effect has been grievous on the society at large. The kind of fraud perpetrated by the administrators in public service generally is termed “White-collar crime”. The rate at which this type of crime has been rising in Nigeria over the years indicates that the Nigerian economy is heading toward collapse, and the country is gradually becoming a failed state (Obadan, 2021). An essential feature of “White-collar crime” is that the top administrators take advantage of their positions to accumulate wealth illegally without considering the effect on society. According to Osakwe (2014), the financial management behaviour of the top administrators in various government parastatals in Nigeria is responsible for the urge for “White-collar crime” noticed in the sector. The tendency to steal public funds and the huge to amass wealth illegally are all drawn from the financial management behaviour of the administrators.

According to Rafindadi and Ogidan (2018), the volume of financial mismanagement in the public service generally in Nigeria is enough to ground the whole economy if not for the few anti-corruption agencies in place. The establishment of the Economics and Financial Crimes Commission EFCC and the Independent Corrupt Practices Commission ICPC have gone a long way to checkmate some of the financial mismanagement and corrupt practices among the administrators in many government parastatals in Nigeria. Rafindadi and Ogidan (2018) identified some factors influencing the financial management behaviour of an individual. These factors are stated as follows:

2.6.1 Factors influencing financial management behaviour (FMB)

There have been diverse opinions on what constitutes determinants of FMB in the literature. However, the most common ones, which cut across virtually all the literature, are discussed briefly in this sub-section.

2.6.1.1 Income and Financial Management Behaviour

Djasuli and Fadila (2021) remain one of the few studies that concluded that no significant relationship exists between income and financial management behaviour. The study separated two sources of income as responsible for this conclusion. Firstly, it was deduced from the survey that income from hard work differs from other sources of income like donations and grants, among others. It showed that if other sources of income are more than the hard work income, then income might not significantly impact financial management behaviour. From a different perspective, Al Kholilah and Iramani (2013) opined and concluded from their study that income is not significantly related to financial management behaviour in that the more you earn, the wiser you manage your resources. The main point from the study is that a higher-income earner will behave better when entrusted with fund management than a low-income earner.

2.6.1.2 Higher Education Learning and Financial Management Behaviour

Asandimitra and Kautsar's (2017) research discusses the importance of higher education qualification in financial management behaviour, and the study concluded empirically that higher educational attainment has a significant positive relationship with financial management behaviour. Herawati (2017) also supported this finding that the teaching of courses related to financial management in college can increase students' financial knowledge to the extent that they will be more careful in engaging in any unnecessary expenditure that can make them to mismanagement their limited resources. Similarly, the study further emphasises teaching courses like financial analysis and investment appraisal techniques to checkmate financial mismanagement. It was found generally by the study that the extent of personal education a person has on financial-related courses will go a long way to have a significant impact on his financial management behaviour.

2.6.1.3 Financial Knowledge and Financial Management Behaviour

Mien and Thao (2015) from their findings concluded that there is a positive and significant relationship between financial knowledge and financial management behaviour. The level of courses and seminars an individual undergoes related to financial disciplines are very important in determining how knowledgeable a person is in finance, which is vital in financial management behaviours. On the contrary, Listani (2017) did not attach any importance to financial knowledge in financial management behaviour. The study concluded that the fact that somebody has a good understanding of finance does not indicate that the person will have responsible financial management behaviour. Herdjiono, Damanik, and Musamus (2016) threw their weight behind Listani (2017) and downplayed the role of formal education in determining financial management behaviour. The study separated learning from application and concluded that it is one thing to learn something, and it is another thing to be able to apply it very well.

2.6.1.4 Financial Literacy and Financial Management Behaviour

Financial literacy refers to the ability to have some knowledge of financial-related disciplines. It might not be in-depth knowledge like financial knowledge. Studies have shown that students who took some finance courses exhibit restrictions in embarking on some unnecessary expenditures. This was demonstrated by the use of their credit cards after the class. The studies of Sabri and Falahati (2014), Borden et al. (2018) and Nidar and Bestari (2014) are examples of these studies. The ability of students in their research to answer basic questions on income and expenditure, debts, and investment appraisal suggests good financial literacy, and this has been found to have some significant impact on their financial management behaviour over the years. These studies opined that financial decision-making is a central premise of financial literacy; hence households need to have some knowledge of finance, mainly credit facility management and expenditure moderation in many cases. These attributes are very germane to having responsible financial management behaviour. Other studies like that of Chen and Volpe (2022) have supported the same thoughts of these previous empirical studies.

2.6.1.5 Financial Attitude and Financial Management Behaviour

Rajna and Ezat (2021) are one of the most prominent works on the relationship between financial attitude and financial management behaviour. It was shown in their study that financial attitude does have a negative and significant relationship with financial management behaviour. The study

concluded that an excellent financial attitude might not influence responsible financial management behaviour. It was found from the study that having a good attitude does not mean you are responsible regarding financial management behaviour. On the contrary, Listani (2017) have a conclusion that shows a positive and significant relationship between financial attitude and financial management behaviour. This study established a strong and positive correlation between financial attitude and financial management behaviour.

2.7. LOCUS OF CONTROL AND FINANCIAL MANAGEMENT BEHAVIOUR

Like the previous discussions, there have been divergent views on the relationship between locus of control and financial management behaviour. Some authors believe locus of control significantly affects financial management behaviour, while others think otherwise. For instance, the study of Ida and Dwinta (2019) confirmed that an exemplary locus of control does not lead to responsible financial management behaviour in most cases. On the contrary, Thi et al. (2015) established a significant relationship between the two, but the relationship is negative. Listani's (2017) findings showed that an individual's good locus of control is a good recipe for responsible financial management behaviour. All these studies identified both outer and inner locus of power, and the studies are unanimous in concluding that the internal locus of control matters most in financial management behaviour.

2.8. A REVIEW OF THE TRENDS OF FINANCIAL MISMANAGEMENT AND CORRUPT PRACTICES IN THE NIGERIAN PUBLIC SECTOR

According to Mudzingiri, Mwamba, and Keyser (2018), starting from independence, Nigeria has become one of the most corrupt countries in the world. One of the major reasons the military adduced for taking over from the civilians was the excessively corrupt practices rampant among the civilian leaders. Unfortunately, most military leaders who overthrew the democratically elected leaders became power drunk and more corrupt. It has remained in Nigerian history that the regimes of both General Babangida and Abacha escalated financial mismanagement and corruption generally to an unprecedented level in Nigeria. According to Oyediran and Nwosu (2015), Babangida's regime legalised corrupt practices in Nigeria using terms like settlement and embezzlement. All the anti-corruption crusades and agencies instituted by Murtala and Muhammadu Buhari administrations were rubbished and jettisoned by Babangida Administration.

All the military governors that were found guilty of corruption charges by the then-military administration of Buhari were reinstated, and Babangida returned all their confiscated properties.

Table 2.1 Financial mismanagement under Babangida Administration

| S/N | Details |
|-----|---|
| 1 | Financial misappropriation of up to 2 billion United States Dollars from the windfall of the Gulf War, 1991. |
| 2 | The 30% oil revenue was unaccounted for but was diverted to another account throughout the regime. |
| 3 | A series of humongous extra-budgetary expenditures ran to billions of naira (it was 15.3 Billion nairas in 1989 and rose to 59 Billion nairas in 1993. |
| 4 | About 200 million USD was embezzled from the project Aluminum Smelter. |
| 5 | The better life project gulped 400 million nairas without any success recorded. |
| 6 | A considerable amount of money was siphoned from the NNPC, running to about a 101million USD. |

Source: ICPC, 2017

On assumption of leadership by General Sanni Abacha, the administration claimed to build its leadership on prudence; hence it went ahead to create the Petroleum Tax Fund (PTF) headed by the retired General Muhammadu Buhari and saddled with the responsibilities of monitoring and managing the fund accruing from taxes on petroleum-related commodities in Nigeria (Oyediran and Nwosu 2015). Notwithstanding, some successes were recorded, but it was soon short-lived with the financial mismanagement that enveloped the administration of Abacha generally.

From the conclusion of Oyediran and Nwosu (2015), the administration was notorious for reckless looting of the Nigerian treasury. Nepotism became the other of the day, with his family members heading most of the country's revenue sources, and the family became one of the wealthiest families in the entire world during this period. Up to date, Abacha's loot tops the list of administrative recklessness in Nigerian history. Many top administrators of government parastatals during this period were stupendously rich and had a series of accounts abroad used

primarily for looting. Chief Emeka Ani, a top administrator during this regime, refunded about 45 million USD to the Nigerian treasury after the death of Abacha. This was evidence of administrators' high level of financial mismanagement under the Abacha regime (Ali, 2013). Under the administration of Abacha, several public utilities manned by government parastatals collapsed owing to financial mismanagement. The four refineries of Nigeria stopped working during this period due to fraudulent and corrupt practices of the administrators in charge of the refineries.

According to Sadiq and Abdullahi (2019), the administration of Abdusalami, which followed that of Abacha, was not in any way better despite the short reign at the helm of affairs. The short period led to awards of contracts never executed under the CBN and the Defense headquarters. As part of the submissions of Enofe, Afiangbe, and Agha (2017), these two government parastatals have been known for monumental financial mismanagement over the years, and they were not different under the short regime of Abdusalami. Again, from the perspective of Oyebamiji (2018), the most significant positive aspect drawn out of the administration was the smooth transition to civilian rule, which people believed would bring more sanity to the public sector financial management in Nigeria. Furthermore, Inuwa, Ononiwu, Kah, and Quaye (2019) stated that, unfortunately, there was no difference in the management of the Nigerian public sector under civilian rule despite many people's hopes and expectations. From the tenure of Chief Olusegun Obasanjo to the present administration of General Muhammadu Buhari, there have been massive corruption cases in the Nigerian public sector. Many administrators have perpetrated monumental financial frauds in government ministries and parastatals without any restriction.

Inuwa, Ononiwu, Kah, and Quaye (2019) further pointed out that quite damning is the fact that virtually every sector of the Nigerian economy is affected by financial fraud. The national assembly is not left out of this menace. All government Ministries, Departments, and Agencies (MDAs) under the judiciary, Military, Policy, and Road safety, among others, are all affected by the endemic nature of financial fraud ravaging the Nigerian economy (Nwoba, and Monday 2018). One of the memorable frauds uncovered under the MDAs was the connivance between the National Assembly Commission and the then-first female speaker of the house of representatives, Mrs Olubunmi Ette, where the allegation of public fund misappropriation was levelled against her that included the award of multiple contracts worth 628 million Naira just for the renovation of

official residence and procurement of twelve official vehicles. In 2012, the then senate president Chief Chimaroke Nnamani also connived with some administrators in the National Assembly Commission to embezzle a massive amount of money, running to 5.4 billion nairas (Ogundiya, 2013). All these fraudulent acts were perpetrated by the politicians using the public service under them during this period of the civilian regime. At the time Nigeria transited to a civilian regime in 1999, the country was ranked among the top three most corrupt nations all over the world. The ranking has not improved since then. The diagram below shows the latest ranking of Nigeria on the corruption index.

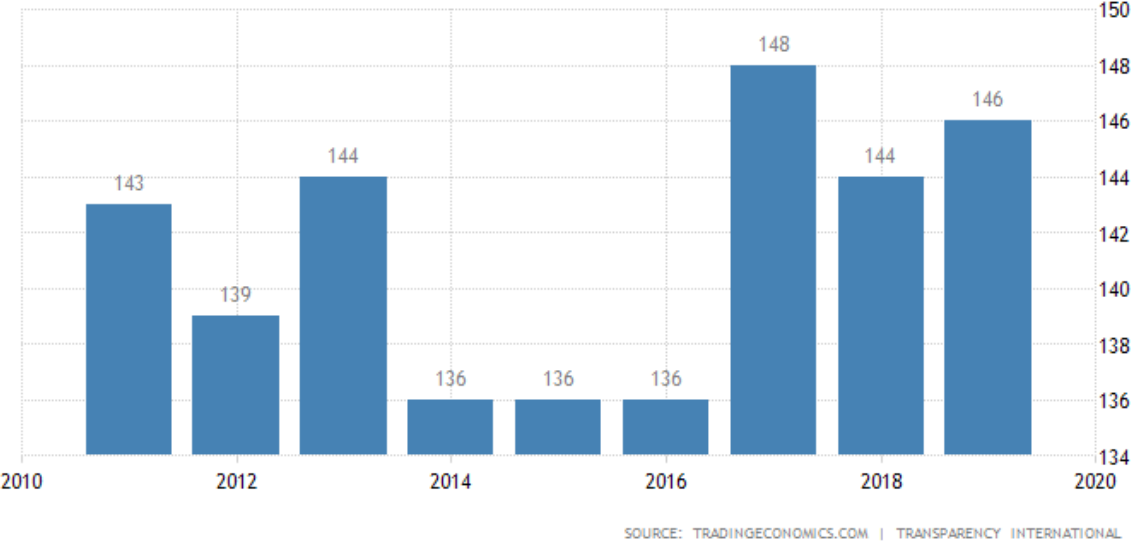


Figure 2.1 Nigeria Corruption Index Ranking

Figure 2.1 shows the last ten years' ranking of the corruption index of Nigeria. The general implication of figure 2.1 is that Nigeria's corruption index had been rising from 143 in 2010 to 146 in 2020. Over 605 corruption cases have been linked to financial fraud, while about 70% are traceable to Nigeria's public sector (Transparency International, 2021).

According to the Economic and Financial Crime Commission EFCC (2020), the volume of financial fraud in the Nigerian public sector in the last ten years has been unprecedented, and the government parastatals are guiltier of the financial mismanagement more than other MDAs under the government. In 2011, the country was ranked 143rd among 182 nationals surveyed by the Transparency International Group (TIG). During this period, the position appeared to be an improvement on the previous year’s performance, but the reason behind it was not because the country improved in corruption ranking but because the survey at that time accommodated more countries. Corruption, especially financial fraud, has become endemic in Nigeria to the extent that all the sectors in Nigeria are affected. Transparency International (2019) reports that the government Ministries, Departments and Agencies (MDAs) and Government Parastatals are the most culpable sectors of financial fraud, which occupies about 78% of the total corruption cases in Nigeria. Table 2.2 shows the ranking of some institutions in Nigeria in financial fraud-related corruption cases.

Table 2.2: Rankings of various institutions on financial fraud and corruption-related cases

| Institutions/Agency | 2017 | 2018 | 2019 | Rank |
|--|------|------|------|------|
| Nigeria Police (Public Institution) | 4.8 | 4.7 | 4.9 | 1 |
| Political Parties | 4.5 | 4.5 | 4.5 | 2 |
| Customs (Public Institution) | 4.0 | 4.2 | 4.2 | 3 |
| Legislature (Public Institution) | 4.2 | 4.1 | 4.1 | 4 |
| Educational System (Public/Private Institution) | 3.8 | 3.8 | 4.1 | 5 |
| Judiciary (Public Institution) | 3.8 | 3.7 | 4.1 | 6 |
| Military (Public Institution) | 3.9 | 3.8 | 3.7 | 7 |
| Utilities (PHCN, NNPC, etc. (Public Institution) | 3.5 | 3.6 | 3.8 | 8 |
| Tax Revenue e.g FRIS (Public Institution) | 3.8 | 3.6 | 3.5 | 9 |
| Business/Private Sector | 3.4 | 3.2 | 3.7 | 10 |
| Registry Licensing (Public Institution) | 3.3 | 3.1 | 3.3 | 11 |

| | | | | |
|---|-----|-----|-----|----|
| Medical Services (Public Institution) | 3.1 | 3.0 | 3.4 | 12 |
| Media (Public/Private Institution) | 3.0 | 2.8 | 3.2 | 13 |
| NGO (Private institutions) | 2.7 | 2.5 | 3.0 | 14 |
| Religious Bodies (Private Institutions) | 2.4 | 2.3 | 3.0 | 15 |

Source: Agenda 20:20:20, Redesigning Nigeria Future

Table 2.1 contains the top 15 ranked institutions where financial fraud was prevalent in Nigeria in the last three years of 2017, 2018, and 2019. It is pretty evident from the table that public institutions dominate the ranking. The Nigerian police force is leading in the rankings, thus, affirming the perception of ordinary Nigerian about the institution. The level of corruption, especially bribery and financial fraud cover-ups, has been unprecedented in recent years despite the enthronement of democracy in the country. Most financial fraud-related cases in the Nigerian police force are about bribery, the collection of unlawful dues like charging the accused for bail despite the incessant crusade against charging money for bail. According to Laeeq, Shahzad, Ramalu and Fareed (2016), many administrators under the Nigerian police force perpetrate financial fraud by collecting vast amounts of money from police officers to influence postings. The top police administrators share this unlawful money as part of their embezzlements at the end of the month.

According to Mudzingiri, Mwamba, and Keyser (2018), the political parties are the next in rank, and it is no surprise since many of the administrators, after embezzling colossal money from the public sector, usually jump into politics to multiply their illegal wealth. This underscores why many retired police officers and military officers are common among the top politicians in Nigeria today. In the 2019 elections, the EFCC put the total money spent by politicians illegally during the election to approximately 85 billion nairas. This money was used to buy votes, bribe the electoral officers, or incite violence. The customs are followed, and the government owns them. Customs is a government parastatal that monitors the movement of goods and services across the land borders of Nigeria. The level of financial fraud in this government agency is much more under the civilian regime than in the military regime. The porosity of the Nigerian border in recent years led to the shutting of the Nigeria land borders in December 2019 to her neighbours due to financial fraud by top administrators in the Nigerian custom. Smuggling of illegal commodities like arms,

banned food, consumables, and industrial products, most of which are toxic to consumption, is prevalent through the Nigerian borders at a huge cost paid by the importers to top customs administrators (Mudzingiri, Mwamba, and Keyser, 2018). The nature of the financial fraud informed the ongoing changes in the agency's top officers in recent years, yet the level of financial fraud in the parastatal is far from beginning abated.

It is not surprising that the utilities, judiciary, and the military are all in Nigeria's top ten financial fraud-endemic government agencies. The Power Holding Company of Nigeria (PHCN) is a significant parastatal in charge of power supply in Nigeria. Apart from the poor service delivery, the level of financial fraud in the company reached an intolerable state in 2012 when about 3 trillion nairas spent on power in the last ten years yielded no result (NBS, 2019). Most of the money released to the company disappeared into thin air without achieving 10% of the funds it was initially meant for. The administrators in the company continued to live affluence and a stupendous lifestyle from the illegal money embezzled (Nwoba and Monday, 2018). This finally led to the unbundling of the sector into three companies, namely the GENCOS (generating companies), DISCOS (Distribution Company), and the TCN (Transmission Company) in November 2013. Despite all these efforts, the poor service delivery of the company continues. With the vast amount of money spent, the total power available for distribution in Nigeria is still less than 5000MGW for a population of about 200 million (IEA, 2019). In all, it is evident from the table that public institutions dominate the top fifteen ranked financial fraud endemic institutions in Nigeria. This further underscores the importance of this study since these public institutions are controlled by top administrators who usually mastermind most of the financial frauds.

2.9 APPRAISAL OF THE NIGERIAN GOVERNMENT'S EFFORT AT CURBING FINANCIAL FRAUD IN NIGERIAN PARASTATALS

According to the constitution of the Federal Republic of Nigeria (2004), government parastatals that are established to tackle financial fraud in Nigeria are passed into law by National Assembly following the acknowledgement of the President via a bill stating the need, functions, membership, duties, and power of such parastatals.

2.9.1 Economic and Financial Crime Commission (EFCC)

The Economic and Financial Crime Commission (EFCC) was established similarly in the Federal Republic environment. In 2004, EFCC was led in by the Obasanjo-led administration to fight against greedy financial fraud that identified the system during just stopped successive military regimes. According to Waziri (2019), EFCC's creation was also imperative to right the world's feelings about Nigeria in as much as that domestic financial fraud is on the high side, which draws the negative attention of the world. EFCC became one of the public accountability systems with the necessary power and financial support of the Federal Government following the passing of a law to support its creation.

Waziri (2019) further stated that the major role of the EFCC, among others, includes the assessment of all financial illegality (EFCC Act, 2004: 4). Given this, it is authorized to impose the condition of extant laws on fraud and financial illegality which include; Money Laundering Act 2004; 2003 No7 1995 No.13; the Advance Fee Fraud and Other Fraud Related Offences Act 1995; the Failed Banks (Recovery of Debts) and Financial Institutions Act 1991, as amended; Miscellaneous Offences Act Any other law or regulations relating to economic and financial crimes, including the Criminal code of penal code (EFCC Act, 2004). Consequently, the commission has enough authority to carry out an inquiry to know if individual, company or organisation has perpetrated any illegality under the act or whether the law relates to economic and financial crimes" (EFCC Act, 2004: 5). The EFCC is Nigerian law enforcement agencies that carry-out financial illegality such as advance fee fraud and money laundering. In addition, Nigeria has been named as one of 23 countries that are not cooperating with the effort of the international community to wage war against money laundering. As a result, EFCC was created in 2003 to act to the pressure from the Financial Action Task Force on Money Laundering (FATF).

In Nigeria, EFCC is the appointed Financial Intelligence Unit (FIU) that is saddled with the task of overseeing the implementation of all laws dealing with economic and financial illegality and different systems engaged in waging war against money laundering (Economic and Financial Crimes Commission (Establishment) Act, 2004) (Waziri, 2019). It should be noted that the Commission has been able to and still recording achievements in different areas of its direction. The recorded victory includes convictions for corruption, money laundering, oil pipeline vandalism, and similar offences. Property and funds worth more than \$11 billion have been retrieved from dishonest officials and their lieutenants. The commission has more than 1500 cases

in court, secured more than 600 judgments, and is firm with more than 65 notable cases at an advanced level of prosecution in different courts in Nigeria. One of the most prominent fraud cases in the world, the bank fraud in Brazil, entailing about \$242 million, has been well investigated by the commission. The country's income has been on the high side due to the joint effort of the Federal Inland Revenue Service and seaport, in which more than N75 billion (over \$500 million) income had been retrieved for the government.

Furthermore, Anyanwu (2019) stated that aside from the power given to EFCC by the act, it equally can:

- (a) carry out an inquiry about the law similar to economic and financial illegality and also examine whether an individual, company, or organisation has perpetrated any offence under this act.
- (b) carry out a probe by the Commission into the asset of an individual, company, or organisation if it seems that the level/extent of an asset does not match his source of revenue (EFCC Act, 2004: 5).

EFCC is given the power to carry out its various duties of:

- (a) The total management and implementation of this Act as provided.
- (b) Probing all financial illegality such as contract scams, fraudulent encashment of negotiable instruments, money laundering, counterfeiting, illegal charge transfers, computer credit card fraud, contract scam, advance fee fraud, etc.
- (c) The implementation roles are given to any individual or authority and implementation and management of all economic and financial illegality laws.
- (d) The measure endorsed to detect, freeze, and seize gain acquired from terrorist activities; properties' value equals such increase and economic and similar financial illegality.
- (e) The measure endorsed eliminating the economic and financial offences of the commission.
- (f) The measure endorsed comprises coordinated preventive and regulatory actions, introduction and maintenance of investigative and management methods to prevent economic and similar financial offences.

- (g) The collaboration was put forward to eliminate economic and similar financial offences and fast-tracking the quick exchange of scientific and technical information.
- (h) Recognise any person, company, or organisation engaged in examining and finding out all reported economic and financial offences cases.
- (i) The resolution of the level of missing funds and other losses by the public, company, or any person or organisation.
- (j) Joint effort with the public sector both in and out of Nigeria performing complete roles or part with the same regarding those of the commission, namely:
- The finding, resolution of the location, and individuals' dealings who engaged in economic and financial offences.
 - The asset acquired from the commission of economic and financial and other similar offences and working of gains.
 - The exchange of workers or other professionals.
 - The suspicious transaction and individuals engaged in global economic and financial offences can be identified by the creation and maintenance of a technique for monitoring.
 - Keeping data, statistics, records, and reports on individuals, organisations, gains, assets, documents, or other items or properties engaged in economic and financial offences.
 - The impact of economic and financial offences and encouraging the government on necessary mediation measures for curtailing and determining the manifestation, level, and magnitude by carrying out research and related works.
 - Dealing with any assistance between Nigeria and another country that engages in Economic and Financial offences and matters connected with repatriation and deportation.
 - All reports concerning suspicious financial transactions collected were analysed and distributed to all government parastatals.
 - Activities concerning the current probe and judgment of all crimes related to economic and financial offences and management of all responsibilities.

- The collaboration of all established economic and financial offences investigating units in Nigeria.
- Sustaining the link with the attorney general's office of the federation, the Nigerian Customs Service, the Immigration and Prison Service Board, the Central Bank of Nigeria, the Nigeria Deposit Insurance Corporation, the National Drug Law Enforcement Agency, and all government security and law enforcement agencies and such other financial regulatory authorities in the elimination of economic and financial offences.
- Investigating and maintaining diligent public sensitisation against economic and financial offences in and out of Nigeria.
- Investigating such other activities is vital for the total offload of all or any of the roles in the Act (EFCC Act, 2004: 5).

Therefore, it is recognised that a standard system can only combat financial offences. Financial offences and corruption were recognised as major elements impeding economic growth and social development in Nigeria, as identified in the development of the first implementation plan of Vision 2020 (Nwoba and Monday 2018).

Because of this, the planned government spending in EFCC amounting to \$8.1billion (\$50.6Million) from 2010-2013 to energize them to increase their capacity to investigate their mandate for the country's aspiration of becoming the leading economy can be accomplished (Nwoba and Monday 2018).

According to Aiyede (2020), due to its registered achievement, the EFCC has become the most reappearing in Nigerian dailies' headlines. Furthermore, in 2013 alone, the commission obtained 117 judgments against many people and the company on issues of financial offences of different degrees (EFCC, 2013).

However, the EFCC was queried because it is believed that its action is targeted toward the opponents of the incumbent president. According to Odinkalu (2019: 33), challenging corruption is a process of fighting against President Obasanjo's political enemies which he was accused of using the instrument at will. There is the failure of EFCC to probe the financial offences traced to the 2003 election, which was supported and also the accusation of bribery in the National Assembly as a result of failed constitutional amendment bill which sought to elongate the tenure

of the president and state executives (Aiyede, 2019). In waging war against corruption rocking the country, the commission has shown a reasonable reason for bringing in accountants despite the attackers. The EFCC chairman, Ibrahim Lamorde, advised that the accountants should take up the challenge of waging war against corruption rather than being associated with the menace (efccnigeria.org), urging them not to be in the front role of shielding corruption. In quick response to the former President of the Institute of Chartered Accountants of Nigeria (ICAN), many anti-corruption workshops/seminars had been conducted by the institute, planned to focus on a significant aspect of the economy by beaming a flashlight on them' (EFCC Nigeria. org, p. 4).

Similarly, in the report of Waziri (2019), Francis Ojaide, the nonfunctioning ICAN President, has talked about the forensic certification initiative of the institute that 'The institute's effort is timely and a confirmation of its seriousness to fight corruption, fraudulent and other immoralities that have been a barricade to the nation's development (Obuh, 2014: 1). According to Idehen (2013) Association of National Accountants of Nigeria (ANAN) with the same attitude being the next most important professional accounting body in Nigeria after ICAN, also attached it seriousness to work with the EFCC to assist in probing financial misappropriation and other finance: related offences cases in the nation. It repeated its determination when the institute's president declared his readiness to create a training institute for forensic accounting and financial misappropriation management for security officers in Nigeria and other West African countries (Owuamanam, 2013). Furthermore, the president pinpointed the major function of accounting understanding if harmonized with the investigative training of the security personnel in waging war against the corruption problem in Nigeria.

2.9.2 The Independent Corrupt Practices Commission (ICPC)

In 2000, another germane institution was created to wage war against financial illegalities, the Independent Corrupt Practices Commission (ICPC) (Anyanwu, 2019). Its major responsibilities are to probe reports of dishonest practices, eliminate dishonesty in public bodies, and sensitize the public against corruption. Among the duties of the ICPC is the interception of corruption via studies of institutions, practices, and procedures. While the EFCC is a probing and judgment body centred on financial illegality, ICPC has a wider command to stop corruption in all ways by probing and sensitization (Ekweremadu, 2018). CBN has been given a greater task in dealing with money laundering due to the modification made to legislation in 2002. To protect the trust in the

financial system as a whole, the Governor has been allowed by the amendment legislation greater power to intercede in the banking sector.

2.10 BUDGET SLACK CREATION AND ACCOUNTABILITY IN GOVERNMENT PARASTATALS

According to Kramer and Hartman (2014), the term budget slack is common among administrators in the public sector, especially those in charge of finance. Moreover, it is used in budget management in many government parastatals where budget preparation is necessary. Budgetary slack is when somebody intentionally underestimates their capability of themselves during the budget preparation to make targets in the budget easier to achieve. Typically, budget slack is applied to administrators involved in budget preparation, but an individual uses it in their various endeavours to checkmate their financial recklessness on the home front or in the place of work.

The usage of budget slack by administrators in their line of duty to ensure that key performance indicators at their various official assignments are met. According to Olanrewaju (2016), budget slack creation might have negative implications on the budget process because it gives administrators the opportunity to provide false representation during budget preparation. It is believed to promote inefficiency and waste during implementation (Yuen, 2014). Waller (2018) states that budgetary slack is the surplus of resources above what is required to complete the task. From the perspective of Young (2015), the creation of budget slack is a situation where revenue is deliberately underestimated or expenditures are overestimated to build surplus requirements regarding resources. Generally, it has to do with underestimating one's capability to carry out a particular task. It is referred to as a tight budget in which targets are made more stringent than necessary. Many establishments are against the practice because it encourages staff to hide their capability to execute a particular task. In other words, it promotes indolence and laziness because the actual abilities of the employee might not be disclosed. Kramer and Hartmann (2014) stated that applying budget slack in various workplaces for official duties requiring budget preparation has advantages and disadvantages.

Advantages

- “When budgeted cost in an organisation is overestimated, expenses can be transferred to future years to come.

- In the presence of uncertainty concerning the future, for instance, when creating a budget for a new product line that has not been introduced to the market, the creation of budget slack offers an avenue for flexibility for the management in executing their operations.

Disadvantages

- It may undermine efficiency and performance among the employees of such an organisation because their ability will be displayed only in limitation to the attainments of goals set.
- When budget slack creation has to do with revenue underestimation, it will also limit expenses of key and important functions such as research and development, expenditure on advertisement and production. This will translate to underperformance generally on the part of the organisation.”

2.11 APPLICATION OF BUDGET SLACK BY ADMINISTRATORS AND INDIVIDUALS FOR PERSONAL BUDGETS

According to Kramer and Hartmann (2014) and Nwoba and Monday (2018), the principal aim of budget slack creation by an individual in their day-to-day financial activities or within the household is to checkmate unnecessary expenditures and encourage a frugal lifestyle. The discussion on budget slack above shows that it is typically used by corporate origination, not individuals. Notwithstanding, it was discovered that individuals prone to a flamboyant lifestyle and interested in checkmating this kind of lifestyle have been adopting the system of budget slack creation in their day-to-day financial transactions. There are some points to be noted when applying budget slack creation to personal budgeting.

2.12. ESSENTIAL POINTS ABOUT BUDGETARY SLACK APPLICATION TO PERSONAL BUDGETING

Huang and Chen (2019) explained the following important aspects in the application of budget slack to individual budgeting:

- “It is deliberate over-estimation of the budget expenditure or under-estimation of the budget income of the person during the period of preparation of the budget.

- Individuals' creation of budget slack is usually a personal decision and not compulsory, but the aim might differ from household to household.
- The application of budget slack by individual households depends on many factors that vary from one individual to the other. Some of these factors might be family demographic or non-demographic
- In most cases, an individual applying budget slack creation to their budgeting might not carry any family member or another party along since it is a personal decision.
- Budget slack can be applied annually or monthly by an individual, but the most common period in personal budgeting is monthly since incomes are paid to individuals every month”.

Since budget slack creation is a personal decision when it comes to its application to personal lifestyle, some factors can influence its adoption by a household. Strömbäck, Lind, Skagerlund, Västfjäll, and Tinghög (2020) identify the following factors as influencing the decision of a household to adopt budget slack.

2.12.1 Self-control:

This is the ability to control impulses in an individual's various decision-making processes. In personal finance, self-control refers to the ability to control impulses linked to direct feelings of anxiety about a person’s financial condition. Furthermore, self-control measures the extent to which a person feels anxiety about many decisions and various uncertainties regarding their financial behaviour regardless of their financial position at a particular period. For example, it is believed that people that have feelings of anxiety about their financial position are more likely to adopt budget slack to reduce the stress they feel concerning the uncertainties surrounding their financial commitments at a particular period.

2.12.2 Optimism

The level of optimism one feels concerning the uncertainties surrounding one’s financial position at a particular time can influence the adoption of budget slack creation in personal budgeting. According to Puri and Robinson (2017), the optimistic individual tends to make savings for the future. They put more energy to work and then retire at the end. In addition, some people are

extremely optimistic. It has been agreed that depressed people are primarily pessimistic about their future finances and suffer more seriously from pessimism bias than non-depressed people. These types of people might show some deficiencies in financial behaviour. All these characteristics significantly affect an individual's adoption of budget slack creation at a certain period of their lifetime.

2.12.3 Deliberative Thinking

The direct opposite of deliberative thinking is intuitive thinking. Behavioural bias has been adjudged to be affected by deliberative thinking in decision-making. Thoma et al. (2015) discovered that heuristic judgment is directly linked to intuitive thinking. It was also pointed out that people who deal in finance or are more conscious about their finance engage in deliberative thinking more. The implication is that many deliberative thinkers are more likely to use budget slack in moderating their budgets personally and checkmate some unwanted expenditures in their budget.

2.12.4 Other control factors

Putra, Albab, and Swara (2019) also identified other control factors affecting an individual's budget slack creation. These factors are mostly ones that have been identified before as determinants of the financial management behaviour of an individual. They include financial literacy, attitude, and locus of control.

2.13 CONCLUSION

This chapter discusses financial management behaviour and the performance of government parastatals in Nigeria. The review covers the discussion on trends of public sector performance generally in Nigeria, the financial management behaviour of administrators in government parastatals in Nigeria and the application of budget slack by individuals. In most cases under discussion, Nigeria is used as a case study because it is the country under review. In addition, all the efforts made both in the past and current by the Nigerian government to curb financial mismanagement by administrators in government establishments have been extensively discussed. Findings from this chapter have shown that financial management behaviour is determined by quite a several factors as identified in the reviewed literature. In addition, it was shown in the chapter that corruption in the Nigerian public sector generally is mainly in the form of financial

mismanagement, and the cause has been changing from one administration regime to another. It was revealed from the reviews done in the chapter that the Nigerian government has made a series of efforts to checkmate financial mismanagement among the public servants. These range from the establishment of various antigraft agencies to the promulgation of decrees and laws. In addition, it was shown in the chapter that budget slack used more adoption may be influenced by various factors that may have some implications on the financial management behaviour of an individual. The next chapter discusses the empirical and theoretical literature.

CHAPTER THREE

THEORETICAL LITERATURE REVIEWS

3.1 INTRODUCTION

This aspect of the research discusses the theoretical literature. The discussion starts with the theories that are related to financial management behaviour. In addition, models and theories that are related to budget slack or budget slack adoption are also reviewed in this chapter. The essence of this chapter is to provide a theoretical underpinning for the models that will be adopted to estimate the relationship among variables of interest under the methodology. Since this thesis is more about the behavioural approach to finance, some studies that touch on the behavioural aspect of finance will be given more attention under the review of the theoretical literature. At the end of this chapter, it is expected that the theoretical relationship existing between different variables of interest in the study will have been established. This formed part of the post-estimation test for the models estimated under the analysis. However, there is a possibility that some of the research outcomes for the analysis might not conform to the theories reviewed here, while some may also follow the theoretical postulations on the relationship among or between some variables of interest. Generally, the chapter will provide theoretical backing for estimating techniques and selecting the model adopted under the methodology.

3.1 FINANCIAL MANAGEMENT BEHAVIOUR THEORY

Financial management theory found its relevance in applying general behavioural theories in the literature. Some relevant behavioural theories linked to financial management behaviour are the Theory of Reasoned Action (TRA) and the Theory of Planned Behaviour (TPB). The two are somehow related, but the TRA precedes the TPB. These theories are discussed as follows.

3.1.1 The Theory of Reasoned Action (TRA)

3.1.1.1 Basic Tenets of The Theory of Reasoned Action (TRA)

The TRA was propounded by Fishbein & Ajzen (1967) and was designed to understand an individual's voluntary behaviour by examining the underlying essential motivation to act. TRA states that a person's intention to perform a behaviour is the main predictor of whether or not they perform it. Additionally, the normative component (i.e. social norms surrounding the act) also contributes to whether or not the person will perform the behaviour. According to the theory, the

intention to perform a certain behaviour precedes the actual behaviour. This intention is known as behavioural intention and comes from a belief that performing the behaviour will lead to a specific outcome. Behavioural intention is important to the theory because attitudes to behaviours and subjective norms determine these intentions. TRA suggests that stronger intentions lead to increased effort to perform the behaviour, which also increases the likelihood for the behaviour to be performed.

3.1.1.2 Assumptions of The Theory of Reasoned Action (TRA)

The major assumption of this theory is that behavioural intention is determined by two variables: attitude and subjective norm. Attitude refers to a person's evaluation of the behaviour (e.g. how much they like or dislike it), whereas subjective norm refers to one's opinion about what important others think they should do.

3.1.1.3 Criticisms of The Theory of Reasoned Action (TRA)

First, the TRA does not consider that certain conditions that enable the performance of a behaviour are not available to individuals. Since the TRA focuses on behaviours that people decisively enact, the theory is limited regarding being able to predict behaviours that require access to certain opportunities, skills, conditions, and resources. Additionally, certain intentions do not necessarily play a role in connecting attitudes and behaviour. According to a study conducted by Bagozzi and Yi (2018), the performance of a behaviour is not always preceded by a strong intent. Attitudes and behaviours may not always be linked by intentions, particularly when the behaviour does not require much cognitive effort.

3.1.1.4 Relevance of The Theory of Reasoned Action (TRA) to the Study

This theory is relevant to this study as it can predict how admin officers in the public service will behave based on their pre-existing attitudes and behavioural intentions and the effect on organisational performance. Their status as administrative officers in public services is crucial to their tendency to carry out and act. Therefore, from the perspective of TRA, which stated that apart from intention, some social attributes also account for an individual's behaviour. These social attributes can be the social status of the individual serving as an administrative officer in the SOEs. The implication of this is that the financial management behaviour of these administrators is greatly linked to their job status as administrative officers in their respective offices. The relevance

of this study to the broad objective is very germane as it emphasizes the effect of administrators activities on the performance of an organisation. This is related to the fourth gap identified in this study as explained in the next chapter.

3.1.2 The Theory of Planned Behaviour TPB

3.1.2.1 Basic Tenet of The Theory of Planned Behaviour TPB

TPB focuses on factors that influence individuals' behavioural choices. It was propounded by Ajzen (1991). According to this theory, three main factors affect behavioural intentions: Include; subjective norms and negative and positive attitudes toward target behaviour, among others (Rivis and Sheeran, 2003). The reaction of someone to a particular behaviour can be taken as the assessment of the person's character, which might be positive or negative. This greatly influences one's belief or perceived outcome after a behaviour is displayed. Subjective norm refers to the belief of a person's acceptability or unacceptability of certain behaviour from another person. TPB incorporates an additional variable—perceived behavioural control, which is not mainly associated with traditional attitude-behavioural models, e.g. Rivis and Sheeran (2003). Perceived behavioural control explains the beliefs about the difficulty in displaying the behaviour—reflecting both previous experience and expected barriers. Generally, the rule is that whenever an attitude is favourable to a particular behaviour, this brings a greater perceived social acceptability and approval. In addition, it also leads to ease in carrying out such behaviour and stronger behavioural intention.

Furthermore, the theory of planned behaviour can be described as the extension of the theory of reasoned action by Ajzen and Fishbein, 1980; Fishbein and Ajzen, 1975. The theory became expedient as it emanated from the original model, which has limitations in dealing with situations where the individual does not have complete or volitional control. As the name implies, planned behaviour is not about uncontrollable behaviour but a form of behaviour that can be subjected to the performer's control at any time. This is one of the main differences between the theory of reasoned and planned behaviour.

The situation regarding the theory of planned behaviour is described in Figure 3.1.

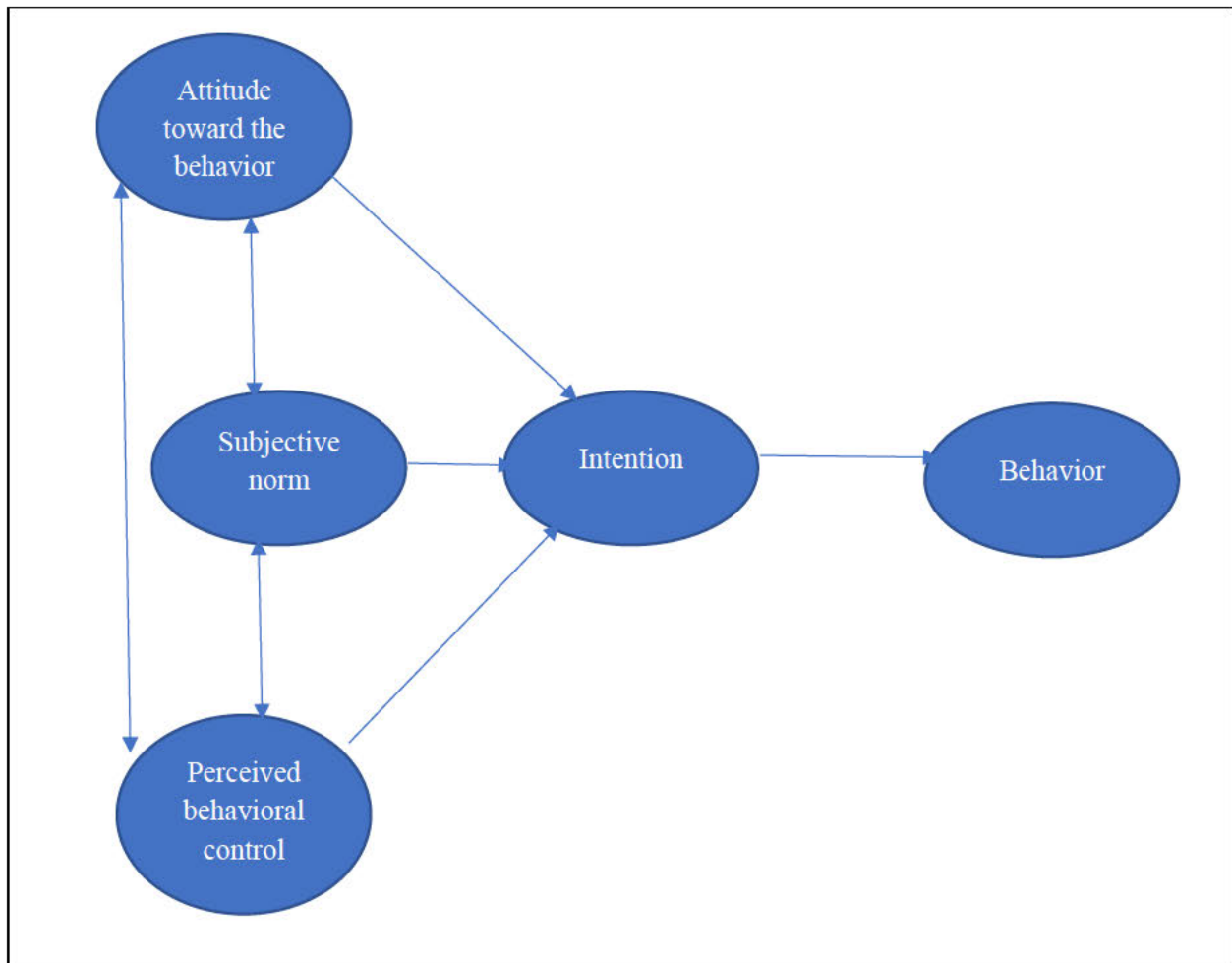


Figure 3.1 Theory of Planned behaviour

Source ICEK AJZEN (1991)

Figure 3.1 is a diagram that describes the theory of planned behaviour using structural notations. According to Ajzen (1980), this is similar to the initial theory of reasoned action, and the most central variable is the intention of the individual to carry out a particular action or obligation. In addition, some motivational factors are identified to be influencing intentions which also have an attendant effect on behaviour. These include how much or to what extent people are willing to try or, in another way, what amount of effort they are willing to put into specific actions to show a particular behaviour. In general, when the intention is stronger, then there is a likely tendency that there will be performance. However, a behavioural intention can find expression in behaviour only if the behaviour in question is under volitional control. This again resonates with what the theory of planned behaviour is all about. It is highly subjective and not objective. Deliberate control is included, and that is why it is planned.

3.1.2.2 Assumptions of the Theory of Planned Behaviour TPB

The proponents of the theory of planned behaviour identify some factors crucial to the existence or applicability of the theory of planned behaviour. According to Ajzen (1991), these are as follows:

- (i) Behaviour is seen as a product of a particular decision-making process which is not believed can be changed at any given period.
- (ii) Intentions are seen as immediate precedent action before a behaviour is carried out. In other words, the stronger the intention to carry out specific behaviour, the more realistic that performance will happen.
- (iii) Human beings are rational and make appropriate and judicious use of any information available at any time.

3.1.2.3 Criticisms of the Theory of Planned Behaviour TPB

- (i) Neglect of affective behaviour in human beings. According to Morison (2017), the theory of planned behaviour is too cognitive. Instead, provisions should be made for effective actions and regrets that might follow an action. This should form part of the model to make it more realistic.
- (ii) There should be no provision for the intention-behavioural gap. For example, it is argued that the intention of acting immediately might differ from the intention of carrying out such behaviour or performing such an action in the future.
- (iii) The strength of attitude is not taken care of very well. According to Morison (2017), Some attitudes are powerful and are not easily amenable or subjected to changes, especially those with consequential effects.

3.1.2.4 Relevance of the Theory of Planned Behaviour to the Study

The theory is relevant to the study in the sense that it explains the idea behind the relationship between attitude intentions and behaviour. Acceptability of an attitude will influence the behaviour of an individual. The current study implies that once an attitude of mismanaging finances is acceptable to an administrator, this will affect the behaviour of such administrators. The study further emphasises the importance of intentions, just like the TRA, but the modification here is that some driving factors of intention are identified, such as subjective norms, perceived behavioural control, and attitude. All these three have some roles in determining the behaviour of

an individual. For example, an administrator with negative financial management behaviour could have taken this from the subjective norms around him, which are greatly affected by his attitude and perceived behavioural control. Generally, the financial management behaviour of an administrator is a function of the intention, subjective norms, perceived behavioural control, and attitude. All these factors can be significantly responsible for the type of disposition an administrator displays toward an act perceived as financial mismanagement or related actions. This theory explained factors that are responsible for certain behaviour in an individual. The second objective of this study which is the assessment of the determinant of financial management behaviour and the second gap identified are related to this theory.

3.1.3 The Transtheoretical Model of Behaviour Change (TTM)

3.1.3.1 Basic Tenets of The Transtheoretical Model of Behaviour Change (TTM)

The transtheoretical model of behaviour change (TTM) was developed by Prochaska and DiClemente (2005). They formed the model by highlighting major psychological theories in a uniform framework to help people change their undesirable behaviours. The major constructs of TTM include the stage of change, the process of change, self-efficacy, and decisional balance. TTM identifies five stages of behaviour change: pre-contemplation, contemplation, preparation, action, and maintenance. If a person is unwilling to change in 6 months, they are in pre-contemplation. If a person is willing to change in 6 months, they are in contemplation. If they are ready to change in 30 days, they are in preparation. They are in action if they have started to change for less than six months. They are in maintenance if they have been changing for over six months but less than 18 months. If they have changed their behaviour for more than 18 months, we consider their behaviour has been changed. Some people may relapse to previous stages. At times, behaviour change may take several cycles. TTM also identifies ten processes of change, in which processes are strategies or interventions for facilitating behaviour change.

3.1.3.2 Assumptions of The Transtheoretical Model of Behaviour Change (TTM)

The TTM operates on the assumption that people do not change behaviours quickly and decisively. Instead, behaviour change, especially habitual behaviour, occurs continuously through a cyclical process.

3.1.3.3.Criticisms of The Transtheoretical Model of Behaviour Change (TTM)

There are several limitations of the TTM, such as ignoring the social context in which change occurs, such as sex and income. Also, the lines between the stages can be arbitrary, with no criteria for determining a person's stage of change. Likewise, the questionnaires developed to assign a person to a stage of change are not always standardised or validated, and there is no clear sense of how much time is needed for each step or how long a person can remain in a stage. Moreover, the model assumes that individuals make coherent and logical plans in their decision-making process when this is not always true.

3.1.3.4.Relevance of The Transtheoretical Model of Behaviour Change (TTM) to the study

The name of the theory, trans-theoretical, suggests transformation, which implies that this model was developed for the applied purpose of counselling. Hence, it is a framework for counselling in the administration against corruption. Also, the TTM can be employed to assess an individual's current stage of change and accounts for relapse in people's decision-making process. The theory is also relevant to the study as it underscores the importance of recognising bad or good behaviour and the need to change accordingly. The financial management behaviour of administrators can either be responsible or irresponsible. This implies that once an administrator recognises reckless financial management behaviour, the TTM theory can be applied to assess the tendency of change in such behaviour. On the other hand, once an administrator recognises that a behaviour depicts responsible financial management behaviour, the TTM can be used to investigate whether the individual can change to a bad behaviour that is irresponsible soon.

3.2. BUDGET SLACK THEORY

Of various theories related to budget slack, the Moral Equity Theory is the most relevant to the objective of this study as it explores an individual's moral justification for controlling their budget at a particular period.

3.2.1 Moral Equity Theory (MET)

3.2.1.1 Basic Tenet of The Moral Equity Theory

The moral equity theory is generally based on a particular concept that depends on fairness and justice. This is believed to have a significant influence on moral thoughts. According to Dees (1992; 56), "society usually expects conformity to some social norms which include, public duty

sense, justice, honesty, fairness, respect for others privacy, among others. “All these revolve around ethical considerations”. MET pointed out that ethical consideration might form the basis for some managers’ judgment, reflecting when they consider the fairness and morality of their organisational activities or actions. Therefore, when a setting that encourages a participative budget is considered - especially when morality is believed to be a form of social pressure that is internalised - anyone who thinks the action is not fair to the organisation and shareholders might be reluctant to act. This is because such ethical consideration might encourage subordinates to adhere to the internal norms of the organisation and, in turn, make subordinates decrease the budget slack amount. The reverse is the case in a situation where a subordinate realising that he is prone to violating ethical considerations may instil this into himself by increasing his budget slack (Syahrir, 2017). Relating this to our study, we expect managers’ moral equity to moderate the relationship between their level of budget slack and their financial management behaviour. However, CFI modified the application of budget slack by identifying uncertainty in income and information asymmetry, which depicts the variation in information available regarding future expenses and revenues, especially among managers in a particular place of work. Lastly, the availability of rewards for prudent management by managers may also influence the decision of a manager to create budget slack.

3.2.1.2 Assumptions of The Moral Equity Theory

- (i) The theory shows that an individual is not only concerned about their own reward for a job done in an organisation but also concerned with the reward of others.
- (ii) The theory also emphasises that employees in an organisation always expect fair treatment from employers in such a way that there won't be a need to engage in any act of manipulating the budget.
- (iii) It is also emphasised that employees already know how to assess their reward by comparing it to what is given to others. In this case, they can ascertain whether they have been treated fairly.
- (iv) Any aggrieved employee that feels unfairly treated can engage in other acts to compensate him or herself for the unfair treatment in reward allocation. Unfortunately, this often leads to budget manipulation, creating budget slack.

3.2.1.3 Criticisms of The Moral Equity Theory

The major critique of the theory lies in the fact that the theory hasn't considered the number of demographic and psychological variables that have affected people's perceptions of fairness and interactions with others.

3.2.1.4 Relevance of The Moral Equity Theory to the study

Some studies have applied this theory to explain the reason behind budget slack adoption by some individuals. The main approach behind budget slack creation is to understand the need to meet a certain benchmark of an obligation to meet equity. This necessitates some individuals to create budget slack to put in the effort to meet the target they want. It is a product of a lack of achievement of the set target on the part of an individual and the need to find means to achieve such a target, which often leads to the creation or adoption of budget slack by most administrators or managers.

3.3 THEORY LINKING FINANCIAL MANAGEMENT WITH ORGANISATIONAL PERFORMANCE

Prominent in this theory is the Rostow stages of economic development. The theory identifies stages of economic performance and attributes of these stages as they affect general economic development.

3.3.1 Rostow's theory of economic development

3.3.1.1 Basic Tenet of Rostow's theory of economic development

Rostow (1990) came up with the Rostow stage theory. The theory divided society into five classes depending on their different levels of economic development. The classes are the traditional society, the pre-conditions for take-off, the take-off into self-sustaining growth, the drive to maturity, and the age of high mass consumption. The idea is that society's institutions are crucial at different stages before a nation transitions from one stage to the other. Especially from the drive to maturity to mass consumption. The organisations' aggregate performance is critical to the country's overall economic performance, which will indicate the readiness or otherwise of the country to transit to the next stage. The theory practically underscores the roles of institutions in economic development, and they play a significant role in the transition from one stage to the other, as the case may be.

3.3.1.2 Assumptions of Rostow's theory of economic development

- (i) It is assumed that it applies to the western economic model.
- (ii) International trade among nations is believed to be liberal by transporting manufacturing facilities from advanced countries to less developed ones.
- (iii) It is primarily based on a bureaucratic society.

3.3.1.3 Criticisms of Rostow's theory of economic development

- (i) The theory has a known result because it follows society's historical geography and bureaucratic setup.
- (ii) The theory just identified changes that will occur without specifying the agents that will be responsible for such changes., hence it cannot guide society into sustainable economic growth.
- (iii) The theory is primarily tailored toward the American and British economies; hence the applicability to other countries is very difficult.
- (iv) The model specifies the neoliberal trade relationship among countries where manufacturing is transferred from the developed countries to the less developed ones.
- (v) There is some overlapping in the stages. For instance, the take-off stage and the pre-condition for take-off are very similar without any important distinguishing features.

3.3.1.4 Relevance of Rostow's theory of economic development to the study

Economic performance, the aggregate of organisational performances, comprises fiscal discipline, policy formulation, and institutional reforms. All these activities revolve around financial management in the public sector. The effect of stages of economic development on both finances and general financial management in the public sector are all emphasised by this theory. From the theory, a low level of economic performance needs a high level of investment, especially infrastructure, to achieve sustainable economic development, and as such public expenditure rises.

3.3.2 Upper Echelons Theory (UET)

3.3.2.1 Basic Tenet of the Upper Echelons Theory (UET)

The roots of the upper echelon theory (UET) lie in the firm's behaviour theory, which suggests that managerial choices are not always following rational motives but are largely influenced by the

rational limitations of managers as human beings (Neilsen 2010). Behavioural factors, such as bounded rationality, multiple and conflicting, and various aspiration levels, are believed to influence strategic choices made by top executives, which in turn determine firm performance (Neilsen, 2010). The basic idea here is that the choices of top managers influence organisational performance.

The upper echelon theory states that managerial background characteristics partially predict organisational outcomes, strategic choices, and performance levels (Hambrick & Mason, 1984). Hambrick (2007) noted that the central idea or core of upper echelons theory has two interconnected parts; executives act based on their personalised interpretations of the strategic situation they face, and these personalised construals are a function of the executives' experiences, values, and personalities. For example, suppose people want to understand why organisations do the things they do or why they perform the way they do. In that case, they must consider the biases and dispositions of their most powerful actors- their top executives (Hambrick, 2007) for top executives matter, contrary to the view-that large organisations are swept along by events or somehow run themselves as it has been argued directly by Hall (1977) and indirectly by the population ecologists (Hannah & Freeman, 1977).

Child (1972) argued that the top management team in a firm has substantial discretion in determining the future strategic contour of the firm. Early empirical research on upper echelons investigated the effect of top management teams' heterogeneity in observable background characteristics like age, functional track, career experiences, and education level on various organisational outcomes, which are firm's competitive behaviour, level of diversification, innovativeness, corporate strategic change and performance (Nielson 2010). If strategic choices have a large behavioural component, then to some extent, they reflect the decision maker's idiosyncrasies. As March and Simon (1958) argued, each decision maker brings their own set of 'givens' to an administrative situation (Hambrick & Mason 1984). In other words, to understand any firm's strategy, people would need to understand the strategists first, that is, the top executives. Simply put, the upper-echelon theory sees an organisation as a reflection of its top managers.

3.3.2.2 Assumptions of the Upper Echelons Theory (UET)

The theory assumes that executive managers interpret situations and execute decisions based on their own unique experiences accumulated throughout their lives. The view was founded on the premise that organisational outcomes are directly impacted by those occupying managerial roles' knowledge, experiences, and expertise (Hambrick & Mason, 1984). The Upper Echelons Theory (UET) states that managers' factors influence their perceptions of situations and strategic choices. Hambrick (2007) further clarifies the theory by saying that the decision-makers actions are based on their personalised interpretations of situations; their actions or formulated strategies are shaped by their personal experiences, values, and personalities.

3.3.2.3 Criticisms of the Upper Echelons Theory (UET)

On critical analysis of the growing body of literature and from the point of view of this researcher, the Upper Echelons Theory (UET) does not seem to recognise the value or the importance of participative management. Rather than promoting a deep locus of planning, the theory focuses on a shallow locus of planning or centralization of authority, which sees strategy formulation as the exclusive preserve of top management. Other criticisms are as follows:

- (i) Failure of the UET to provide an adequate exploration of what is called a cognitive black box. According to Neely, Lovelace, Cowen, and Hiller (2020), some factors are supposed to mediate between the orientation of administrators or executives and organisational performance. However, these factors were not included in the analysis of the UET.
- (ii) The relational black box, too, was not given adequate attention in the UET. From the perspective of Neely, Lovelace, Cowen, and Hiller (2020), several calls have been made in the research for a more thorough examination of the behavioural manifestation of the administrators' orientation. Also, how these behaviours affect their relationships with the motivation of the shareholders who are the owner of the organisations. It is believed that this aspect that the UET neglects significantly affects organisational performance.
- (iii) Lack of moderate consensus on the empirical application of the UET. According to Neely, Lovelace, Cowen, and Hiller (2020), many studies that have applied UET tend to come up with different findings it is applications. The reason behind this was

attributed to the usage of unreliable proxies of variables, while in some studies, it was identified that contextual factors tend to mediate in the behavioural characteristics of administrators with different attendant effects on organisational performance. All these have made the application of UET to empirical studies very cumbersome.

3.3.2.4 Relevance of the Upper Echelons Theory (UET) to the study

The theory of UET is generally based on the orientation of administrators or executives and how this orientation affects the organisation's performance. Since this study is about the effect of the financial management behaviour of the administrators and the performance of the SOEs, this theory is of great relevance as the financial management behaviour of administrators could have been a product of different orientations in the past by these administrators. Therefore, the factors that affect these orientation remains one of the focus of the UET. These factors connect with the characteristics that determine the financial management behaviour of the administrators in the SOEs. It should be noted that this is one of the objectives of this study.

In addition, the UET emphasises the relationship between the administrators' orientation and the organisation's performance. This is directly related to the fifth objective of this study which is the analysis of the impact of the financial management behaviour of the administrators on the performance of the SOEs. The idea behind this under the UET is that manifestations from the orientation of the administrators do have a significant influence on the overall and general performance of the organisation where they exist. Consequently, the UET remains one of the most relevant theories linking the financial management behaviour of administrators with organisational performance.

3.4 CONCLUSIONS

This chapter has reviewed various theories that are relevant to the study. Findings from the review have shown that several theoretical contributions exist in the literature that relates to the relationship between financial management behaviour and organisational performance. These theories touched on different objectives of the study. For instance, it was discovered that the MET theory directly relates to adopting budget slack. In contrast, the theory of TPB speaks mainly on the measure of the financial management behaviour and the determinants of the financial management behaviour of the administrators. The Rostow theory relates to the effect of financial management behaviour on organisational performance. The same thing was discovered from the

UET. In other words, it can be concluded from the chapter that several theories relating to financial management behaviour and their application to organisational performance are also described by some of these theories.

The next chapter focused on another aspect of the literature review: the empirical review. This is the aspect where previous empirical studies that are related to the study are reviewed.

CHAPTER FOUR

EMPIRICAL LITERATURE REVIEWS

4.1 INTRODUCTION

Several studies have emerged on financial management behaviour, budget slacks, and organisational performance. However, what distinguishes these studies are their areas of focus and scope. Therefore, few studies are discussed based on the objectives of this study. In other words, many of these studies are not directly related to the objectives of this study, but the few that have a direct link with the study will be given priority here.

4.2 STUDIES OF FINANCIAL MANAGEMENT BEHAVIOUR MEASUREMENT SCALE (FMBS)

Some of the earliest studies on developing measurement scales for financial behaviour management were by Fitzsimmons, Hira, Bauer and Hafstrom (1993); Hilgert, Hogarth, and Beverly (2003). What is common to both is that they both made use of the frequency of financial problems to measure financial management behaviour and come up with a scale. The only difference between the two studies is the case study used to validate the scale. However, since the two used financial problems as a proxy for financial management behaviour, they failed to utilise real indicators of financial management behaviour to develop their scales.

Some developments after these earliest studies gave birth to some studies, prominent among them are Jorgensen, 2007; and Xiao, Shim, Barber, and Lyons, 2008. The FMBS developed by the two studies was for a particular set of people in society. For instance, Xiao, Shim, Barber, and Lyons (2008) developed it for students and examined financial education, financial knowledge, and risk behaviour in students. Three major indicators, such as personal course-taking, financial knowledge, and risky credit behaviour, are used to develop a scale for financial management behaviour in the students. Multiple regression analysis was conducted, and it was found that personal finance courses in colleges and schools are positively related to subjective financial knowledge. It was also discovered that subjective financial knowledge reduces the tendency to embark on risky attitudes or tasks.

Jorgenson (2007) investigated the financial literacy of college students and the influence of parental and peer control. The study also focused on students. He measured the financial behaviour of college students using personal financial literacy (knowledge, attitudes, and behaviour), descriptive statistics were applied, and the study concluded that financial knowledge, attitude, and behaviour have a very low score. However, they continue to increase as the students move from the first year up to the Master's level. It was also discovered that students who depended on their parents financially had high financial knowledge, attitude, and behaviour scores. Moreover, from the students' scores or assessments, it was established that a strong positive relationship exists between financial knowledge, financial attitude, and behaviour. But, again, the scale was developed for students and hence cannot be applied to everybody.

The study of Xiao and Dew (2014) is prominent among the latest studies on the development of FMBS. The study used psychometric properties to develop a new scale of financial management behaviours. It was found that the Financial Management Behaviour Scale (FMBS) showed an adequate reliability scale. Furthermore, the FMBS was found to have a high positive correlation with other measures of financial management behaviours. More importantly, the developed FMBS was also a good predictor of savings and consumer debt levels. Finally, the findings show that the FMBS is a good, reliable, and valid measure of financial management behaviours. However, they suggested refinement in the subscale depending on the environment, norms, and socioeconomic factors of the participants in the area under consideration. This study has received massive support as the FMBS developed can be used for different segments of people and gained the widest acceptability among researchers. Several studies, such as Alenoghena and Odior (2018), Strömbäck and Tinghög (2017), and Bapat (2019), have all utilised this scale in their various studies and validated the scale. Unlike the previous studies, this scale can be applied to different segments of the population because it uses more general indicators that reflect the financial behaviour of virtually every human being.

4.3 STUDIES ON DETERMINANTS OF FINANCIAL MANAGEMENT BEHAVIOUR AND BUDGET SLACK

Findings from the literature on determinants of Financial Management Behaviour (FMB) show that several studies used a similar factor. In contrast, some few used different ones, and they all came up with diverse conclusions regarding the relationship between FMB and factors influencing

it. Prominent among these studies is the study of Mien and Thao (2015), where factors influencing personal financial management behaviour in Vietnam were critically assessed. The study identified factors including personal financial attitude, financial knowledge, and locus of control as determinants of FMB. After applying the survey method with the use of questionnaires and quantitative analysis, the study concluded that financial attitude and knowledge have significant positive impacts on financial management behaviours. The study further showed that the person who has a more external locus of control leads to worse financial management behaviour.

Strömbäck, Lind, Skagerlund, Västfjäll, and Tinghög (2020) identified some factors that account for changes in the financial management behaviour of an individual and the role of budget slack. Using a cross-section of Swedish households, the study discovered that adopting budget slack to moderate financial management behaviour is strongly influenced by self-control, which is a subjective factor against objective factors identified by some financial management theories. In a similar study, Puri and Robinson (2017) added optimism as an important factor apart from self-control that can drive the adoption of budget slack and its effects on a household's financial management behaviour.

Struewing and Jirjahn (2019) took a different perspective from that of Mien and Thao (2015) and identified gender and risk attitude as the main factor influencing FMB. After the administration of the questionnaire on the target respondents, who are mainly households in Germany and analysed using quantitative techniques, the study found out that both risk-taking attitude and gender have a significant influence on FMB, but this differs across nationalities as the data comprised German, Spanish and Italian nationals. In a different development but similar to the study of Mien and Thao (2015), Salim (2015) identifies three factors: education, financial literacy, and financial attitude as the three factors responsible for a household's FMB. After the survey of some households in Malaysia, the study discovered that financial literacy is the most important factor affecting the FMB of the households in the country.

Prihartono and Asandimitra (2019) appear to be more recent studies that used broader factors. The study focused on income, higher education, financial knowledge, financial literacy, financial attitude, and the locus of control as factors influencing FMB among students in Indonesia. It was

survey research that made use of questionnaires and quantitative techniques. The study concluded that Income, Financial literacy, and Financial attitude all significantly affect FMB, while higher education, Financial knowledge, and Locus on control failed to impact FMB significantly.

Some studies do not directly investigate the determinants of financial management behaviour but examine the effect of some variables on financial management behaviour and assess the extent to which they determine financial management behaviour. Some of those studies include that of Qamar, Khemta, and Jamil (2016), where the effect of money attitude is assessed on performin's financial management behaviour. In the study, financial knowledge and self-efficacy were used as moderating factors. Students were used as a sample in the survey and selected from private and public universities using purposive sampling techniques. The results of the hierarchical regression and factor analysis, which were the main tool of analysis in the study, showed that money attitude and financial knowledge significantly impact the financial management behaviour of the sampled students. It was discovered further that financial self-effacing showed a positive moderating effect on the relationship between personal financial management behaviour and the money attitude of the students. Financial knowledge also displayed a similar result on the moderating effect. The summary of the study indicated that financial knowledge, financial self-efficacy, and money attitude are important determinants of personal financial management behaviour among young adults or students in the university.

From another perspective, Grable et al. (2020) were more concerned about some other psychosocial variable's effect on financial management behaviour. In other words, they investigated the extent to which the following two psychosocial constructs—financial knowledge and generalized anxiety—are associated with financial management behaviour. A purposive sampling technique was used to select 110 adults in an integrated clinic who usually seek psychologist services. These clients were used as respondents in the survey, and both questionnaire focus group discussion and interview methods were used to elicit information from the respondents. Qualitative analysis was used to analyse the primary data collected, and the results indicated that both financial knowledge and anxiety play a lot of moderating effect on the relationship between these psychosocial variables on financial management behaviour among the clients.

Using a different methodology, the study of (Birkenmaier and Fu, 2019) employed a secondary data approach, unlike all the previous studies that used primary data to investigate the relationship between financial access and financial management behaviour. The study also went to the extent of finding the determinants of both. The data used were extracted from the 2012 and 2015 National Financial Capacity Study. Both Exploratory and confirmatory factor analysis were used to analyse the data collected, and the result from the analysis indicated that, on the one hand, financial access is determined by a savings account, retirement account, checking accounts, credit, home ownership, emergency funds, investment and health insurance. It was found that variables such as cash management, consumption, and emergency saving loans are the main determinants of financial management behaviour. The relationship between financial access and financial management behaviour was also found to be significant

The study of Bapat (2020) is among those studies investigating determinants of financial management behaviour. In the study, attention was shifted to how antecedents of financial management behaviour affect an individual's current financial management behaviour. The study focused on young adults, and the model used financial risk tolerance as a moderating variable. The ages of the group of young adults included ranged from 18 years to 35 years. The two-step ordinary regression analysis and partial least square structural equation modelling were employed. The analysis shows that the moderating effect of financial risk is significant in the relationship between demographic features and financial management behaviour.

Furthermore, Yap, Komalasari, and Hadiansah's (2018) studies focused on the family pattern of financial management behaviour and investigated the determinants at the family level. The major objective of the research was to examine the role of financial literacy and financial attitudes as determinants of financial management behaviour among families. The study used 200 married men and women, and financial management behaviour was used as a dependent variable in the first model. However, the second model was used as a mediating factor to examine the relationship between financial attitude, financial literature and financial satisfaction. Two-step multiple regression analysis was used as the main method of analysis. Findings from the study showed that financial attitude is the most important determinant of financial management behaviour among families. In addition, financial management behaviours also were found to be important determinants of financial satisfaction.

Hunjra, Iqbal, Shaheen, and Niazi (2022), as part of the studies that investigated determinants of financial management behaviour, investment literacy was explored as a determinant of financial management behaviour. The study used 272 financially independent adults under 40 years of age. Quantitative analysis was used to approach the study using a well-structured questionnaire. The study mainly investigated the cognitive development among adults on their inclination toward investment in financial literacy. The regression analysis shows that metacognitive strategies play an important role in investment literacy, which has important implications for the financial management behaviour of adults. The study also showed responsible financial management behaviour as a symptom of the ability to invest wisely and appropriately. Using other sets of respondents, Asandimitra and Kautsar (2019) investigated the effects of financial self-efficacy, financial information, and emotional intelligence on the financial management behaviour of women lecturers in both public and some private universities in Indonesia. All 200 women were selected for the survey. The sampling method was quota techniques, and the data were collected via interviews and questionnaires. The analysis was done with the use of both descriptive statistics and inferential statistics. The multiple regression results on the public universities show that emotional intelligence, financial self-efficacy, financial knowledge, financial attitude and financial literacy significantly impact female lecturers' financial management behaviour. But in the private university, these variables failed to impact the female lecturers' financial management behaviour significantly.

From another approach entirely using secondary data, Cho, Gutter, Kim, and Mauldin (2021) examined the effect of financial socialisation on the financial management behaviour of older categories of individuals ranging from 24 to 66 years of age. Data were collected from NC-1172, which comprises complex data on savings. Both descriptive and inferential statistics were used to analyse the data. Particularly the ordinary least square estimating technique was applied to the secondary data. In addition, the logistics regression analysis was also included in the estimating technique. The result indicated that lessons learned from financial planners and discussions with parents by a child on how to spend money greatly influenced the financial management behaviour of the respondents. Therefore, these two are regarded as strong determinants of financial management behaviour.

Nazah, Ningsih, Irwansyah, Pakpahan, and Nabella (2022), in their study, focused more on the role of UKT scholarship on the effect of financial attitude and financial literacy on the financial management behaviour of some students who have access to the UKT scholarship. The study discovered that over the years, there seemed to be some attitudinal changes in student finance management whenever they get the UKT scholarship. This prompted this research to investigate the moderating effect of the UKT scholarship on the financial management behaviour of these students. The population of the study was 81 students who have access to the UKT scholarship. The saturated sampling techniques were adopted for the study. Therefore, all 81 students were used as a sample for the survey. The approach used in the analysis was quantitative, and the questionnaire was designed to elicit information from the students on how they spend their money after they get the UKT scholarship. The linear regression was mainly used as the estimating technique, and the result of the study indicated that UKT scholarship has a significant moderating effect on the influence of financial literacy and financial attitude on the financial management behaviour of the students. It was discovered that access to the scholarship either increases their responsible financial management behaviour or decreases it, as the case may be.

Andreou, Louca, and Panayides (2014), like the few studies that used secondary data to investigate the determinants of financial management behaviour, also adopted secondary data to examine the effect of corporate governance on the financial management behaviour of managers and the effect on firm performance. Variables of corporate governance used in the study included the CEO duality, board size, insider ownership and the corporate governance committee. The effects of all these variables were investigated on the financial management behaviour of the managers and the effect on the firm performance. Maritime firms were the focus of the study, and both secondary and primary data were used in the study. The descriptive analysis and the regression result show that a robust correlation exists between corporate governance and the financial management behaviour of managers. This relationship is also shown to have strong implications for the performance of the firms.

Very few studies investigated the impacts of budget slacks, and none assessed the impact on FMB. Notwithstanding, several studies on a budget slack application in the corporate budgeting process and not in individual personal finance. The only study where budget slack adoption was applied

to individual or household finance is in the study of financial security mobility (2016), where a survey of some households was carried out, and the effect of budget slack adoption was investigated on their income and expenditure during the period. The study used secondary data approach and relied on the data provided by the Bureau of Labour Statistics, particularly the consumer survey section of the reports to explore the relevance of income and budget slack adoption or creation effects on household financial management behaviour and their domestic expenditures generally. The used data on households between 1996 and 2014. Both inferential analysis and descriptive statistics were employed in the study to analyse the data collected. About 60 household data were extracted from the survey, and the spending differences affecting their financial management behaviour were also given priority in the analysis. Results from the analysis indicated that expenditures and income were reduced after the great depression. The study further revealed the nature of the financial management behaviour of the households during the period. It was further discovered that before 2004 during the great recession, many homes were found to have increased in the adoption of budget slack, while after the recession, especially after 2014, the mean income indicated that budget slack has reduced among the households as many of the households are now becoming more financially stable. There was an establishment of a significant relationship between budget slack adoption by the families and their respective expenditures and generally the financial management behaviour of individual households during the period under review. Furthermore, the adoption of budget slack to moderate the financial management behaviour of the homes was more common among low-income families than high-income families. The survey provided more support for the usage of budget slack to moderate domestic expenditure of the households as this is found to be helpful in moderating their financial management behaviour.

Apart from the study reviewed above, other studies were more focused on the application of budget slack to the corporate entities' budget preparation, and these studies explored the need for budget slack creation why some of the studies investigated the effect of the budget slack adoption on the performance of the organisations and the implementation of the budget. In all the studies reviewed, some supported budget slack creation, and some were against it. Studies in these categories are reviewed as follows.

One of these studies is that of Kahar and Mahdi (2018), which investigated the effect of budget slack on job satisfaction in the public sector of Indonesia. The study analysed the questionnaires using structural equation modelling, and the results suggest a significantly negative effect of participative budgeting on budgetary slack, and the relationship between job satisfaction and participative budgeting is positive. The result further confirmed the significant negative relationship between job satisfaction as a mediating variable and budget slack.

Another study investigated the adoption of budget slack using government agencies (Rose and Smith, 2021). The study focused on the effect of budget slack on both income and expenditures of government agencies. It was discovered that after the budgeting process, there is some surplus which may engender tax cuts and hence make revenue very unrealistic, while in some studies, it was discovered that precautionary measures led to budget slack creation in the first place, often leading to the pressure of slack resources. Therefore, the extent to which budget slack affects budget stabilization funds BSF in the US was given priority in the study. Data from 42 states in the US were relied upon, and both descriptive and inferential analyses were applied to the data during the analysis stage. It was a fund that the BSF limited budget slack adoption effect on revenue. In other words, budget slack was seen as aiding the lack of transparency in fiscal administration, while using BSF helps limit these adverse effects.

Webb (2020) 's attention shifted to determinants of budget slack adoption by budget officers in an organisation. The study investigated the effect of reputation and variance investigations on the adoption of budget slack by the organisation. It was a survey study where budget officers of about 68 organisations were selected using a purposive sampling technique. These primary data were later analysed using ANOVA and regression analysis. An interview was used to support the questionnaire that was distributed to the respondents, and the result from the analysis shows that many of the budget officers are favourable to adopting budget slack to guide against their reputations. It was also found that the adoption of budget slack for variance investigation was more rampant among corporate entities than non-corporate entities among the surveyed firms. The study found a significant relationship between the adoption of budget slack and the two determining factors.

Yuen (2018) examined the influence of goal clarity and goal characteristics on the adoption of budget slack. It is part of the few studies that focused on the determinants of adopting budget slack.

In the analysis, some variables were used to proxy clarity, while others were used to proxy goals characteristics. A sample of 108 hotel managers was selected from the survey via purposive sampling techniques. Interviews and a focused questionnaire were used to elicit information from the respondents. Quantitative analysis was relied upon by the study to analyse the data collected. The reward system and communication were additional variables used in the study as determinants of budget slack. The symbiosis relationship among the goals clarity, goals characteristics and the duo of communication and reward system was also investigated. The result of the study indicated that the adoption of budget slack is very dependent on both goal clarity and goals characteristics. Notwithstanding, the study further established a significant correlation between communication, reward system and goals clarity. The structure of the reward system in the organisation of the hotels was also found to have a significant impact on the adoption of budget slack.

Similarly and still on the determinants of budget slack adoption, the study of Okafor and Otalor (2018) examined the inclusion of subordinates and employees other than the central budget officers in budget predation and the effect of this on budget slack adoption. The survey selected 800 employees from about 129 quoted firms in Nigeria. These firms are quoted on the Nigerian stock exchange. However, in the end, 269 responses were used for the analysis. The questionnaire was the main instrument used to collect information from the respondents. Only a few cases were interviews used to support the data collection process. Quantitative analysis was mainly used to analyse the data, and these techniques included correlation analysis, regression, ANOVA, factor analysis, logistic regression and probit. Validity and reliability test were also carried out on the data before the main analysis.

Furthermore, tests such as normality, heteroscedasticity and multicollinearity were also carried out on the estimated model to ascertain its suitability for inferential purposes. Findings from the study vividly show that budget participation often leads to more adoption of budget slack among the firms. The study further found that the more employees are involved in the budget preparation process, the more the tendency to create budget slack. In contrast, it encourages a broad budget process. Therefore, the study advises some caution about using budget slack often by organisations during budget preparations.

The study of Steven (2022) also focused on the determinants of budget slack by looking at the effects of opportunistic self-interest, reputation and ethics. Asymmetric information between the

supervisor and subordinate was used as control variables. The control variable also includes productive capacity. The effect of all these was investigated on budget slack adoption. A survey of 678 personnel in different manufacturing firms across Europe was made, and quantitative analysis was used to harvest information from the respondents. The result from the analysis was consistent with the earlier findings in these lines that subordinates exercise some restrictions in adopting and supporting the adoption of budget slack.

Notwithstanding, these subordinates were found to be demonstrating a negative reputation and covering up the avenue via which their supervisor can be aware of the areas where budget slack is created in their budget. It was found that reputation is a solid mediating variable in determining the adoption of budget slack. Ethics is also found to have a significant impact on the adoption of budget slack.

From a different perspective, Lal, Dunk, and Smith (2016) were more concerned about detecting the existence of budget slack in budget preparation. The study was one of those studies that delved into the application of budget slack in a corporate organisation. A survey of 89 companies were made, and both subordinates and superiors were examined and completed a well-structured questionnaire during the survey. A random sampling technique was applied, and the ability of the superiors to detect budget slack was examined. The data collected was analysed quantitatively, and the result shows that the attention of superiors to budget slack detection has discouraged subordinates from adopting budget slack.

In a separate perspective different from others (Van der Stede, 2020) examined how the creation of budget slack affects rigid budgeting. In addition, the study also looked at the impact of managerial orientation on the creation of budget slack and the consequences of a rigid budgeting approach in an organisation. The study also examined the moderating effect of budget unit performance in the previous years on the relationship between budget slack creation and rigid budgeting. One hundred fifty-three business unit managers were selected, and questionnaires were administered to elicit information from them. The data collected were analysed using both qualitative and quantitative methods of analysis. The descriptive analysis was initially used before the application of the inferential analysis. The results from the analysis indicated that business unit performance mediate strongly in the relationship between budget slack creation and rigid budget process. Findings further revealed that a profitable business unit has less tendency to create budget

slack since its obligations are conveniently met at the end of the financial year. It was also found that business unit managers with poor performance over the year] are much more prone to budget slack creation, which also affects their rigid budget adoption.

4.4 STUDIES ON FINANCIAL MANAGEMENT BEHAVIOUR AND ORGANISATIONAL PERFORMANCE

Several studies exist on the impact of FMB on organisational performance, but the major difference is that they focus on different organisations with different characteristics of workers with different responsibilities. Prominent among these studies is Hunjira (2018). This study aimed to assess the relationship between financial management practices and the performance of organisations with special emphasis on decisions relating to capital structure, investment appraisal techniques, dividend policy, assessment of financial performance, and management of working capital using the corporate sector in Pakistan. Forty firms listed on the stock exchange were selected from various sectors. The target respondents in the survey were the finance executives and financial analysts in these companies. Questionnaires were self-administered to pay attention to grey areas as the respondents might have stipulated. Findings from the study indicated a positive, direct, and significant relationship between financial management practices and organisational performance.

In a related study, Odior and Alenoghena (2017) assessed the impact of public sector financial management on Nigerian economic performance. Using time series analysis, the stochastic characteristics of data were examined through a unit root test. The techniques of analysis used were the predictive causality test and two-stage least squares (2SLS), which utilised instrumental variables from 1970 to 2016. Findings show that the result of 2SLS indicate static equilibrium. Furthermore, results identified that achieving these goals would be encouraged by commitment, probity, accountability, and transparency by public funds managers regarding the time limit set for the goals. The conclusion from the study showed that effective and efficient public sector financial management in the country needed to consider the pattern of behaviour, social context, and time limits set for achieving set goals. According to them, this would enhance public funds managers' commitment, probity, accountability, and transparency.

Again, Gloy (2018) examined the effects of financial management practices on the profitability of some firms. The financial management focused on by the study were business analysis and control,

investment analysis, and decision-making. Return on Asset (ROA) is used to proxy firms' profitability. In measuring the investment analysis and decision-making practices, the study identified those managers that normally use formal financial methods like payback periods or discounted cash flow methods to assess major expansions. Other questions posed to the producers included conducting profitability analysis for some capital investments. The estimating technique adopted was the ordinary least square multiple regression approach. Findings from the study revealed that business analysis and control variables do not significantly impact profitability.

Instead of using financial management behaviour as an independent variable investigating its effect on organisational performance, certain studies used it as a mediating variable while investigating other variables' effects on organisational performance (Muktiadji, Mulyani, Djanegara, and Pamungkas, (2020). These studies were used internally; quality assurance impact was investigated on the firm performance, and financial management behaviour of the top managers was used as mediating variable in the model formulated to carry out the empirical investigation. The study included respondents from 108 firms in the survey using a purposive sampling technique. The structural modelling equation was used to analyse the data and estimated parameters of interest in the analysis. The results from the analysis indicated that internal quality assurance does not have a significant impact on financial management behaviour, but it does on organisational performance. Moreover, it was established from the study that financial management behaviour did exert a significant impact on organisational performance. The study further underscores the importance of financial management behaviour in organisational performance.

From another perspective, the study of Kharazmi and Teymouri (2013) was more concerned with financial management practices among the organisation's top managers than an individual's financial management behaviour. The study focused on the manager's implementation of financial management practice principles in various organisations. The implication of this on the performance of their respective organisations is investigated. The study examined the ability of managers to reduce costs, improve productivity, minimise wastage, and improve product quality. In addition, the impact of organisational culture is also brought into perspective as it was used as mediating variable in the study. The study was survey-type and used 456 respondents, where data were collected with a questionnaire, and quantitative analysis was used in analysing the data. Precisely, both the descriptive and inferential statistics were applied in the study, and the result of

the analyses indicated that organisational culture plays a significant role that is mediating role before the top managers in these firms can successfully implement financial management practices. This is discovered will have a substantial impact on the performance of the organisation. Park, Shon, and Lu's (2022) study was more concerned with financial health and financial management behaviour as they both determine organisational performance. The study was on firms that are non-profit organisations, and hence the issue of financial health was deemed to be very crucial since there might not be much that can be embezzled regarding profit in such organisations. Notwithstanding, the study included the financial management behaviour of the managers into perspective under the study. Aspects of financial health that were examined are solvency, profitability margin and liquidity status of the organisation were also included. The study selected some nonprofit firms for the research, and their managers were included in the survey. The data collected were analysed using qualitative and quantitative analyses, and the result shows that solvency and margin are important predictors of organisational performance. In addition, the effect of financial management behaviour was more of a mediating role than direct independent variables in the performance model of the investigated nonprofit organisations. Notwithstanding, liquidity was not playing a significant role in the model.

4.5 GAPS IDENTIFICATION

From the reviewed literature, it has been discovered that many studies have developed different measurements for FMB. However, the most acceptable and widely used one is that of Xiao and Dew (2014). Many studies have used their scale to measure the FMB of different sets of people in different sectors in some economies. However, the scale developed by Xiao and Dew (2014) used four domains: the savings and investment domain, cash management domain, credit management domain, and insurance domain. According to Fitzsimmons, Hira, Bauer and Hafstrom (1993), who were among the earliest authors on FMBS, the development emphasised the sociocultural sub-scale as an important scale to measure FMB. However, Xiao and Dew did not use this Sub-scale (2014), and this is necessary due to the nature of Africans generally, whose socio-cultural beliefs influence their financial behaviours. According to Shiller (2019), social functions, religion, and traditional and cultural beliefs significantly link with FMB.

Consequently, this study will refine the four domains used by Xia and Dew (2014) to accommodate the fifth domain, the tagged socio-cultural beliefs management domain. This will aid the

domestication of the FMBS in an African setup where the study is to be conducted. To the best of the knowledge of the author, no studies have constructed or developed a financial management behaviour scale or index for public service administrators in Nigeria.

Again, reviewed literature shows divergent views on factors affecting FMB. Some studies generally identified education, financial literacy, financial knowledge, locus of control, and income as factors that affect FMB (Prihartono and Asandimitra, 2019). However, only one study considered demographic features influencing FMB (Mien and Thao, 2015). This study will build on these studies to engage in a more comprehensive assessment of the determinants of FMB by including both the demographic features of the individual and other factors identified, such as education, financial literacy, financial knowledge, locus of control, and income. In addition, none of the studies used public servants, which is the focus of this study as their case study. Since the nature of the job plays a vital role in FMB, this study will focus on the SOE administrator. This is a clear departure from the sets of individuals used by previous empirical studies.

In addition, empirical studies have shown that the literature on budget slack and FMB is scarce. As earlier pointed out, the creation of budget slacks is primarily designed for managers in charge of budget preparations in corporate organisations to meet their targets (Putra, Albab, and Swara, 2019). Therefore, their application to an individual personal budget is scarce. The only study related to budget slack is that of Kahar and Mahdi (2018), where the impact of budget slack on job satisfaction was examined in the Indonesian public sector. Apart from the fact that the study did not investigate the role of budget slack on financial management behaviour, it was based on a country outside Africa that may have a different working environment from that of Africa. In addition, factors affecting the application of budget slack have been one of the contentious issues surrounding its usage. None of the previous studies has investigated this, which is another vital gap that this study will fill.

Finally, studies on the relationship between FMB and organisational performance have concentrated on different sets of people in society other than the public servant, who is the focus of this study. The private sector, used by many of the studies reviewed, is expected to give a different result from the public sector because the private individual bears the brunt of financial

mismanagement, and hence there is likely to be closer supervision to guide against its occurrence. The use of public servants to investigate the impacts of financial management behaviour on organisation performance is another area the study will contribute to the existing literature.

4.6 CONCLUSIONS

This chapter has discussed the empirical studies that are related to the study. The empirical literature review was divided based on the study's objective. Firstly, the previous studies on the creation or computation of financial management behaviour scales were prioritised. The second aspect of the empirical review focused on studies on the determinants of financial management behaviour, which are discussed extensively. The third aspect of the empirical review focused on studies that focused on budget slack adoption or creation as it affects financial management behaviour and the determinants of the creation or adoption of budget slack. Lastly, the fourth aspect of the empirical literature review discussed previous studies on the relationship between financial management behaviour and organisational performance. This chapter concludes with the gap identification. In this aspect, comparisons were made among the studies reviewed based on their conceptualization, methodology and findings. The study linked each gap in the literature to each of the objectives, thereby solidifying the contribution to knowledge from the study.

The next chapter is the methodology, where various approaches and research methods embraced by the study to achieve all the stated objectives are discussed.

CHAPTER FIVE

METHODOLOGY

5.1 INTRODUCTION

This chapter focuses on the methodology adopted by the study to achieve all the stated objectives in the study. It explains the data collection and analysis method and the sampling techniques adopted for the study.

5.2 RESEARCH DESIGN

Being exploratory research, a survey method was adopted with a selection of respondents using a sampling technique. These respondents were the main participants in the survey that provided answers to the questionnaire. Therefore, a mainly quantitative approach was adopted for the method of data analysis. The study's primary research paradigm and philosophy are positivism and epistemology. According to Cazeaux (2017), since objectivity is the epistemology stance of this research, positivism is the primary research paradigm followed in the study, and this informed the usage of the quantitative methodology approach.

5.3 POPULATION OF THE STUDY

There are 202 federal government SOEs in Nigeria, and all have their headquarters in Abuja, the Federal Capital Territory of Nigeria. Although the numbers of top administrators in these establishments constitute the precise population for the study, the figure is unknown due to the lack of data availability. The only data available regarding the workforce in the SOEs is the total number of employees which, according to the Nigeria Bureau of Statistics (2020), is about 650,000, but the proportion that constitutes senior administrators among them is unknown. However, from the available data from the NBS, the 202 SOEs in Nigeria are divided into 15 sectors, namely, Agriculture, Economy, Energy, Health, Aviation, Communication, Education, Judiciary, Intelligence, Maritime, Media, and Environment, Science, and Technology, Water Resources, and Security. Regarding the employee, the agriculture SOEs have the largest staff, constituting about 28.6% of the entire population of workers, with ten SOEs in the sector. This is closely followed by thirteen SOEs in the education sector, with about 21.8%, and the next is the economy, with about thirty-one SOEs with a share of 18.4% of the workforce. The rest are shared among the remaining 13 sectors. Regarding revenue, the energy sector contributes the highest,

followed by the economy (Nigeria Bureau of Statistics NBS, 2020). Given this information, there is no doubt that the study population is relatively large and unknown.

5.4 SAMPLE AND SAMPLING TECHNIQUES

The study embraces a multistage sampling technique. According to Shimizu (2014), a population involving different groups and strata with varying characteristics. Multistage is applied when the population is complex and clustered. During this sampling method, significant clusters of the selected people are split into sub-groups at various stages to make it simpler for primary data collection (Sedgwick, 2015). This attribute suits the population under this study, where the SOEs are split into different sectors, and the staff is also categorized into different ranks since the interest of the study is on top administrators only. In multistage sampling different at various stages before arriving at various stages. In this study, a simple random sampling technique using the Taro Yamane method is adopted to select the sample size for the number of SOEs covered in the survey. The calculation is as follows:

$$n = \frac{N}{(1+N(e)^2)} \dots\dots\dots(5.1)$$

Where n is the sample size, and N is the population. According to Smith (2013) and Oribhabor and Anyawu (2019), e is the error margin is usually 0.05 used.

In getting the sample for the numbers of SOEs included in the survey, N is 202, the total population of the federal government SOEs in Nigeria. Applying the formula in equation 1 we have;

$$n = \frac{202}{(1+202(0.05)^2)} \dots\dots\dots(5.2)$$

Therefore, the minimum number of SOEs covered in the survey is approximately 135. This is randomly selected from the 202 SOEs. Since all of them are in Abuja, the federal capital territory locating and reaching them is not difficult. More so, the case of COVID-19 has subsided drastically in Nigeria; hence, movement is allowed into offices now.

The second stage of the sample selection is the number of administrators included in the survey from the 135 SOEs. Since there is no data on the number of senior administrators in the SOEs, the population is deemed unknown, and the sampling technique identified by Smith (2013) for calculating sample size from an unknown population is adopted. The formula for calculating the

sample size is described as follows: The formula uses the Z score, confidence interval, margin of error, and standard deviation to calculate the necessary sample size for the study.

$$Necessary\ sample\ size = \frac{(Z-score)^2 * StdDev(1-StdDev)}{(Margin\ of\ error)^2} \dots\dots\dots(5.3)$$

The following terms are defined to understand the formula better; the margin of error depicts the allowance of error expected in the computation. The confidence interval describes the extent of the deviations existing from both the upper and lower means of the population. The implication of the result after applying the formula is that approximately, at least, 385 respondents are randomly selected from the 135 SOEs to participate in the survey. It should be noted that the 385 workers are distributed randomly among the 135 SOEs using their population percentage regarding staff strength, as discussed under the population. Furthermore, although the case of COVID-19 has subsided drastically in the country, personal contact with respondents is greatly reduced during the data collection process since the data collection strategy mainly relies on questionnaires and not a direct interview method. Instead, Google forms are used to send the questionnaire to various emails of the respondents for completion. With this process, contact only occurred in rare cases where compliance was low. This same method was adopted by Xiao and Dew (2014), where mail is sent to the participants to encourage objectivity and freedom when responding to the questionnaires.

5.5 METHODS OF DATA COLLECTION

This methodology aspect discusses the nature and approaches adopted by this study for data collection purposes. The questionnaire is the main approach used to collect information from the respondents. The questionnaires are well-structured. According to Smith (2013), and Oribhabor and Anyawu (2019), this is because the respondents are educated and have busy schedules; hence, the need to structure the questionnaires in such a way that they can be attended to in their leisure time with minimum assistance.

5.5.1 Questionnaire structure

The questionnaire is divided into four major parts: Part A includes questions on the respondents' demographic information. Part B contains questions on Financial Management Behaviour Scales FMBS. Part C involves questions about the various determinants of Financial Management behaviour (FMB), while Part D contains questions on budget slacks. Part E contains questions on

the performance of the organisation. These include questions on profit, revenue, number of employees, and total asset, which shows the organisation's size.

Table 5.1: Questionnaire adaptation and sources

| S/N | Questionnaire Sections | Sources |
|-----|--|--|
| 1 | Part B: FMB scale questions | Xiao, Shim, Barber and Lyons (2008); Xiao and Dew (2014) |
| 2 | Part C: Determinants of FMB questions | Prihartono and Asandimitra (2018); Mien and Thao (2015) |
| 3 | Part D: Budget Slack questions | Olanrewaju (2016); Rose and Smith (2013) |
| 4 | Part E: Organisational performance questions | Odior and Alenoghena (2017); Hunjra (2018) |

The questionnaires are adapted from the sources stated in table 4.1 with a few modifications to capture the case study. The questionnaires have been used in the stated studies and yielded results that have been relied upon for further research by several other studies. For instance, under the literature review, the major work on the FMBS was done by Xiao, Shim, Barber, and Lyons (2008); Xiao and Dew (2014). In addition, the study of Prihartono and Asandimitra (2018); Mien and Thao (2015) was reviewed in the literature. The questionnaires of these studies, among others, were collected and modified to develop the questionnaire adopted for this study.

5.6 METHOD OF ANALYSIS

This sub-section of the research methodology discusses the analytical techniques used to achieve each of the study's objectives.

5.6.1 Investigate the nature of the financial management behaviour of the administrators by developing financial management behaviour scale (Objective one)

One of the novelties of this study is to generate a financial management behaviour scale that can be used to assess any administrator in a private or public organisation. The scale was developed from the financial management scale developed by Xiao and Dew (2014). The earliest approaches to the

development of scale or measurement for an item made use of Factor Analysis (FA) and Grade Point Average (GPA). In the computation of the FMBS by Xiao and Dew (2014), the factor analysis approach was used, which has received wide acceptability among researchers. However, the scale was limited to four domains of FMB, this study built on this and expanded the scale to five. According to Xiao and Dew (2014), 15 indicators were grouped under four domains which formed the following sub-scale, namely (i) SIS - Savings and Investment Subscale, (ii) CMS - Cash Management Subscale, (iii) CRMS - credit Management Subscale, and the (iv) IS Insurance Subscale. These were used in developing the financial management behaviour scale (FMBS). However, as previously explained under the gaps in the literature, this study included the Socio-Cultural Beliefs Management Sub-scale (SCBMS), which captured specific characteristics of Africans regarding FMB (Mien and Thao, 2015). Therefore, three additional indicators describing religious and traditional/cultural beliefs and social status were added to the existing 15 indicators. The factor analysis used by Xiao and Dew (2014) was also adopted in this study to develop the FMBS.

5.6.2 Assess the factors influencing financial management behaviour (Objective two)

The study's second objective is to provide answers to the research question, which is, what factors determine financial management behaviour?

5.6.2.1 Model Specification for the determinants of financial management behaviour

The Theory of Planned Behaviour (TPB), discussed in the theoretical literature, serves as a precursor to the model specification for this objective based on the determinants of financial management behaviour. In the TPB, variables such as financial attitude, financial knowledge, and locus of control are identified as factors that influence the financial management behaviour of an individual. However, demographic features and education status have been used by some studies with these three variables as factors determining financial management behaviour (Mien and Thao, 2015). Consequently, the model explaining the relationship between FMB and its determinants is stated as follows:

$$FMBS = \alpha_0 + \alpha_1FZ + \alpha_2QLF + \alpha_3I + \alpha_4FK + \alpha_5FL + \alpha_6LC + \mu \dots \dots \dots (5.4)$$

Where FMBS is the Financial Management Behaviour Scale computed in objective one, FZ is Family Size, QLF is education qualification, and INC is income, all three represent demographic features. FK is financial Knowledge, FL is Financial Literacy, and LC is the locus of control.

Table 5.2: Apriori Expectations on the determinant of financial management behaviour

| Variable | Expected coefficient signs | References |
|----------|----------------------------|--|
| FZ | +/- | (Barasinska, 2019), Asandimitra, and Kautsar (2017). |
| QLF | + | Kholilah and Iramani (2013) |
| INC | + | Suroto (2020), Asandimitra and. Kautsar (2017). |
| FK | + | Ida and Dwinta (2019) |
| FL | + | Sina (2016); Mien and Thao (2015) |
| LC | - | Chinen and Endo (2021) |

5.6.2.3 Estimating technique for the determinants of financial management behaviour

The model in equation 4.4 is estimated using the regression analysis precisely the weighted least square regression WLS. This approach of regression analysis takes care of the problem of heteroscedasticity in regression results which may render the estimators non-efficient. Therefore, an important pre-estimation test carried out before the application of WLS is the test for heteroscedasticity. Once it is confirmed that the variance of the error term is not constant for all observations, there is the presence of heteroscedasticity; hence, the application of linear regression might not be appropriate and weighted least square regression WLS is opted for. This is the situation in this study. The relationship between the determinants factors and FMBS is estimated using the WLS because their relationship under the pretest showed the problem of heteroscedasticity.

5.6.3 Examine the moderating effect of budget slack adoption on the financial management behaviour of the Administrators and the determinants of its adoption (Objective three)

Following the studies of Kahar and Mahdi (2018), the moderating effect of budget slack on financial management behaviour is done via the weighted least square regression. The effort under

this aspect of the objective is to determine if the effect of any of the determinants of FMBS earlier analysed in the previous objective could have been different with adopting budget slack.

5.6.3.1 Model Specification for moderating effect of budget slack adoption on financial management behaviour

Each of the determinants of the FMBS is paired with budget slack as an interactive variable, and their effect on FMBS investigated. The models are stated as follows:

$$FMBS = \theta_0 + \theta_1FK + \theta_2BS + \theta_3FKBS + \varepsilon \dots \dots \dots (5.5)$$

Where FK is financial knowledge, BS is budget slack adoption, FKBS is the interactive variable of budget slack and financial knowledge, and ε is the error term. θ are parameter estimates.

$$FMBS = \vartheta_0 + \vartheta_1FL + \vartheta_2BS + \vartheta_3FLBS + \epsilon \dots \dots \dots (5.6)$$

Where FL is financial literacy, BS is budget slack adoption, FLBS is the interactive variable of budget slack and financial literacy, ϵ is the error term. ϑ_i are parameter estimates.

$$FMBS = \beta_0 + \beta_1LC + \beta_2BS + \beta_3LCBS + \pi \dots \dots \dots (5.7)$$

Where LC is the locus of control, BS is budget slack adoption, LCBS is the interactive variable of budget slack and locus of control, π is the error term. β_i are parameter estimates.

$$FMBS = \theta_0 + \theta_1FZ + \theta_2BS + \theta_3FZBS + e \dots \dots \dots (5.8)$$

Where FZ is family size, BS is budget slack adoption, FZBS is the interactive variable of budget slack, and family size, e is the error term. θ_i are parameter estimates.

$$FMBS = \delta_0 + \delta_1INC + \delta_2BS + \delta_3INCBS + \omega \dots \dots \dots (5.9)$$

Where INC is Income, BS is budget slack adoption, IBS is the interactive variable of budget slack, and Income, ω is the error term. ω_i are parameter estimates.

$$FMBS = \sigma_0 + \sigma_1QLF + \sigma_2BS + \sigma_3QLFBS + \gamma \dots \dots \dots (5.10)$$

Where QLF is Education qualification, BS is budget slack adoption, QLFBS is the interactive variable of budget slack, and Education qualification, γ is the error term. σ_i are parameter estimates.

5.6.3.2 *Estimating technique for moderating effect of budget slack adoption on financial management behaviour*

Due to the nature of the models to be estimated, which include interactive variables, attention is paid to the problem of multicollinearity in the regression analysis. Therefore the regression analysis adopted included both the Collinearity Diagnostics VIF and analysis of the variance proportions. These two tests included in the regression ensure that the estimator is valid. Furthermore, the usage of the interactive variables in the models informs the cognizance taken about the presence of multicollinearity problems. Consequently, equations 4.5 to 4.10 all used these approaches, apart from other pre and post-estimation tests like heteroscedasticity and autocorrelation.

5.6.4 Analysis of the determinants of budget slack usage or adoption (Objective four)

This is the fourth objective of the study, and it discusses the determinants of budget slack usage of adoption. Depending on the moderating effect of budget slack on the FMB, this study under this section investigates those factors that are most likely to encourage or discourage the usage of budget slack to moderate their financial management behaviour.

5.6.4.1 *Model for determinants of budget slack usage*

According to the Moral Equity Theory (MET), the creation of budget slack has been identified as a way of maintaining some levels of prudence in financial management. Notwithstanding, the theory was elaborated on by the study of CFI (2016), where some factors such as uncertainty in income and information asymmetry depict the variation in information available regarding future expenses and revenues, especially among managers in a particular place of work are used. On this note, the model to be estimated as used in Strömbäck, Lind, Skagerlund, Västfjäll, and Tinghög (2020), Puri and Robinson (2007) is adopted:

$$BSU = \rho_0 + \rho_1 SC + \rho_2 OPT + \rho_3 DT + \rho_4 FZ + \rho_5 FL + ui \dots \dots \dots (5.11)$$

Where: BSU is Budget Slack Usage, SC is self-control, OPT is optimism, DT is deliberative thinking, FZ is Family Size, and FL is financial literacy. ρ_i is parameter estimates. ui is the error term.

Table 5.3: Apriori expectation on the determinant of budget slack usage

| Variable | Expected coefficient signs | References |
|----------|----------------------------|------------|
|----------|----------------------------|------------|

| | | |
|-----|---|--|
| SC | + | Strömbäck, Lind, Skagerlund, Västfjäll, and Tinghög (2020) |
| OPT | + | Puri and Robinson (2007) |
| DT | + | Moxley, Ericsson, Charness, and Krampe, 2012 |
| FZ | - | Prihartono and Asandimitra (2018) |
| FL | - | Mien and Thao (2015) |

5.6.4.2 *Estimating Technique (Logistic regression)*

Equation 4.11 is estimated using logistic regression because the dependent variable, the usage of budget slack, attracts a binary response. The logistic regression provided for more efficient estimators when the dependent variable is coded in binary form; hence it takes either 1 or 0, or 1 or 2. This depends on the interest of the researcher. Both the coefficients and the odd ratio of the results from the regression result provide insight into those factors that determine the adoption of budget slack by a particular administrator in the SOEs. While the coefficient estimated for each determinant expresses the relationship between budget slack usage and each of them, the odd ratio explains the probability of using it divided by the likelihood of not using it. Once the result is more significant than one, the implication is that there will likely be more usage of budget slack if the concerned determinant occurs.

5.6.5 Analyse the impact of the financial management behaviour of the administrators on SOEs performance (Objective five)

This is the last objective of this study. It mainly investigates the effects of the financial management behaviour of the administrators on the performance of the SOEs at the federal level in Nigeria.

5.6.5.1 *Model Specification for the impact of financial management behaviour on SOEs performance*

Following FMBS, which has been adopted by various studies such as Prihartono and Asandimitra (2018); Mien and Thao (2015), a model that describes the relationship between FMB and organisational performance is specified as:

$$ORGP = \phi_0 + \phi_1 FMBS + \phi_2 EMP + \phi_3 GOVAL + \phi_4 GOVP + \phi_5 TA + \tau \dots \dots \dots (5.12)$$

The variables are defined as follows:

ORGP organisational performance, GOVAL is government allocation. EMP is the number of employees, GOVP is government policy, and Total Asset \emptyset is the error term.

Table 5.4: Apriori Expectations on financial management behaviour and organisation performance

| Variable | Expected coefficient signs | References |
|----------|----------------------------|---|
| FMBS | + | Xiao and Dew (2014), Hunjra, A.(2018). |
| GOVAL | + | Akoyo and Muathe, 2017 |
| EMP | + | Lee, (2018), Laeeq, Shahzad, Ramalu, and Fareed, (2016) |
| GOVP | +/- | (Laeq, Shahzad, Ramalu and Fareed, 2016 |
| TA | + | Esteban-Lloret, Aragón-Sánchez and Carrasco-Hernández, (2018) |

5.6.5.1 Estimating techniques for the impact of financial management behaviour on SOEs performance

The model specified in equation 5.12 uses the ordinal regression analysis. The idea behind selecting this technique is that it provides an avenue for pre-estimation that can guide the research on whether to use the linear or nonlinear approach of estimation (Ologbenla, 2022). In this study, the pre-estimation result of the test from normality showed that a nonlinear approach to the estimation is preferable (Feng, Wu, and Song, 2017). The ordinal regression takes care of both location and the impact of the independent variable on the dependent variable. Apart from that, since the presentation or normality test shows that the nonlinear estimation approach is preferable, the spearman rank correlation approach is also applied instead of the Pearson correlation method, which is more suitable for the linear model. Apart from the pre and post-estimation test of normality, which made the study use a nonlinear approach to regression analysis, other tests were carried out before the ordinal regression was estimated. These include the model fitting test, the goodness of fit test and the test of parallel lines.

5.7 PILOT STUDY

A pilot survey was conducted initially to assess the efficacy of the Questionnaire. A smaller sample size with similar characteristics to the main sample size was used. Precisely, the pilot survey used some groups of administrators in the 13 SOEs of Ekiti State, which is the state of origin of the researcher, to conduct the pilot study. The pilot study outcomes offered suggestions regarding necessary adjustments or amendments to the research instrument before the full-scale survey commenced.

5.7.1 Reliability and Validity

From the results of the pilot study, both the reliability and validity of the questionnaire were investigated. A validity test was conducted on the questionnaires to ensure that the questions measure what they are designed to measure. The Kaiser-Meyer–Olkin (KMO) and Barlett’s Test was applied here (Boyaci and Atalay, 2016). Reliability is the consistency in the question’s ability to measure what they are supposed to measure. According to Ryan, Wullems, Stebbings, Morse, Stewart, and Onambele-Pearson (2018), the reliability test used the Cronbach Alpha test, which enabled the study to measure the reliability attribute of the questions.

5.8. ETHICAL CLEARANCE

The study used primary data, which were collected via a questionnaire. A letter was sent to the participants’ email requesting their participation along with the questionnaire. It should be noted that the questionnaire was developed with Google forms, and the link to complete the questionnaire was provided. This reduced personal contact with the respondents due to COVID-19 constraints. The letter of consent assured the respondents of the confidentiality of their responses and assurance that the information provided by them was kept safe.

5.9 CONCLUSIONS

This chapter discussed mainly the research method adopted by the study to achieve all the stated objectives. The chapter covered a discussion majorly on the population of the study, sampling and sampling techniques, method of data collection and the methods of data analysis. The steps taken by the study to ensure the reliability and validity of the research instrument are also discussed in the chapter. Furthermore, variables identification and their roles in each of the models formulated for empirical estimation were also included in the chapter. Lastly, the ethical clearance statements

are captured in the chapter as well. The next chapter focuses on the results and discussion of the empirical analysis.

CHAPTER SIX

DEVELOPING A MEASURE OF FINANCIAL MANAGEMENT BEHAVIOUR FOR SOE ADMINISTRATORS IN NIGERIA

6.1 INTRODUCTION

This aspect of the research work analyses, interprets and discusses the results of the data collected from the survey. It focuses mainly on the presentation of results and discussion of findings on objective one of the study, which is developing a measure of financial management behaviour for the administrators in the SOEs in Nigeria. However, the respondents' response rate and demographic features are explored and discussed before that.

6.2 RESPONSE RATE

Following the findings from the sampling techniques adopted as discussed in the previous chapter, about 500 questionnaires were sent to the targeted respondents, who are the top administrators of government SOEs at various levels. Although not all responded, the researcher collected 403 responses representing an 80.6% response rate. The 385 respondents were randomly selected from the 403 and were used for the analysis.

6.3 DEMOGRAPHIC ANALYSIS OF THE RESPONDENTS

This is the first aspect where all the variables under the demographic and biodata information of the respondents are analysed and interpreted. Table 5.1 contains this information.

The table shows that the composition of the respondents who are top administrators in the federal SOEs in Nigeria are mainly youth and young adults. This segment of people is about 93% of the total population of the entire respondents included in the study. Just less than 10% are above 60 years of age. Most of the generations who form the nucleus of the respondents are between the ages of 30 and 59 years. For gender distribution, most administrators are male, about 88% of the respondents, while the female is about 12%. This shows that top administrators of the SOEs in Nigeria are male-dominated. The distribution also supports the claims that most of the financial recklessness and fraud perpetrated in the entire Nigerian public sector is done by males.

For the family size distribution, most of the family sizes of the top administrators are relatively large. Family sizes of five to seven are the most common among administrators. Also, the analysis

shows that about 40 administrators have a family size above 8. This result indicates that the respondents generally have a relatively large family size. On monthly income distribution, it is obvious that most administrators are in the middle class of income distribution in Nigeria. The largest percentage of the respondents have income that ranges from one hundred thousand nairas (100,000) to three hundred and ninety-nine thousand nairas (3999, 0000) monthly. This income level is enough to be in the middle class considering the economic reality of the Nigerian economy. This set of people is about 87% of the total population of the respondents.

Table 6.1: Demographic Distribution of respondents

| Age Distribution | | | |
|-----------------------------|-----------|----------------|---------------------|
| | Frequency | Valid Per cent | Cumulative Per cent |
| 30 to 39 years | 57 | 14.8 | 14.8 |
| 40 to 49 years | 166 | 43.1 | 57.9 |
| 50 to 59 years | 136 | 35.3 | 93.2 |
| 60 years and above | 26 | 6.8 | 100.0 |
| Total | 385 | 100.0 | |
| Gender Distribution | | | |
| Male | 338 | 87.8 | 87.8 |
| Female | 47 | 12.2 | 100.0 |
| Total | 385 | 100.0 | |
| Family Size Distribution | | | |
| Between 2 and 4 | 164 | 42.6 | 42.6 |
| between 5 and 7 | 181 | 47.0 | 89.6 |
| Eight and above | 40 | 10.4 | 100.0 |
| Total | 385 | 100.0 | |
| Monthly Income Distribution | | | |

| Age Distribution | | | |
|--|-----------|----------------|---------------------|
| | Frequency | Valid Per cent | Cumulative Per cent |
| N50,000-N99,000 | 88 | 22.9 | 22.9 |
| N100,000-N199,000 | 135 | 35.1 | 57.9 |
| N200,000-N399,000 | 121 | 31.4 | 89.4 |
| N400,000 and above | 41 | 10.6 | 100.0 |
| Total | 385 | 100.0 | |
| Years in Service Distribution | | | |
| under five years | 27 | 7.0 | 7.0 |
| 5-10 years | 168 | 43.6 | 50.6 |
| 11 - 15 years | 138 | 35.8 | 86.5 |
| 16 years and above | 52 | 13.5 | 100.0 |
| Total | 385 | 100.0 | |
| Years in current Position Distribution | | | |
| under five years | 70 | 18.2 | 18.2 |
| 5-10 years | 163 | 42.3 | 60.5 |
| 11 - 15 years | 126 | 32.7 | 93.2 |
| 16 years and above | 26 | 6.8 | 100.0 |
| Total | 385 | 100.0 | |
| Highest qualification Distribution | | | |
| First-degree or equivalent | 231 | 60.0 | 60.0 |
| Masters degree | 121 | 31.4 | 91.4 |
| PhD | 31 | 8.1 | 99.5 |

| Age Distribution | | | |
|------------------|-----------|----------------|---------------------|
| | Frequency | Valid Per cent | Cumulative Per cent |
| Others | 2 | .5 | 100.0 |
| Total | 385 | 100.0 | |

Source: Author’s computation, 2022

Furthermore, about 41 administrators out of the 385 are top earners with monthly salaries above four hundred thousand nairas (400,000). Normally with this type of salary, it is believed that there should be little avenue or reason for irresponsible financial management behaviour among the administrators, but this appears not to be the case with the rising cases of financial fraud perpetrated by the administrators of the SOEs

Regarding the year in service, the results show that many of the administrators covered in the survey are highly experienced as they have spent between five and fifteen years in service. This is about 86% of the population of the respondents. Similarly, 52 out of the 385 respondents have spent 16 years and above. These distributions show that the crop of administrators included in the survey understand the nature of their job very well and can supply the needed and required information for the data analysis. With the distribution of the years spent in the current position, there is every reason to believe that many of them have been in the role of administrators in the SOEs for a considerably long period spanning from 5 years to 10 years and above.

Considering the respondents' education qualifications, many are well educated with minimum qualification of both first and second degrees. However, this is expected as they are in the position of administrators. About 60% are with first degree, 31% with master' or second degree, and about 8\$ with a PhD. This speaks volumes about the high level of educational attainment among the respondents. It further justifies the inclusion of financial literacy and financial knowledge as factors affecting the financial management behaviour of the administrators.

6.4 CONSTRUCTING FINANCIAL MANAGEMENT BEHAVIOUR SCALE FOR SOE ADMINISTRATORS IN NIGERIA

6.4.1 Factor Analysis

The first aspect of the Financial Management Behaviour Scale FMBS development is the exploration of the primary data collected from the field using the exploratory factor analysis. The factors analysis enables the study to verify the correct positioning of constructs for each sub-scale of the FMBS, namely (i) Cash Management Sub-scale CMS, (ii) Credit Management Sub-scale, (iii) Saving and Investment Sub-scale SIS, (iv) Insurance Sub-scale IS, and (v) Socio-Cultural Beliefs Management Subscale (SCBMS). Approximately 18 questions were used to proxy the sub-scales and were subjected to the factors analysis to verify how they loaded into each sub-scale. The steps taken are set out below.

6.4.2 Pre-estimation tests

According to Smith (2018), some pre-estimation tests need to be carried out to apply exploratory factor analysis. The outcomes of the tests will determine if factor analysis can be applied to the study.

6.4.3 Sampling Adequacy and Validity test

The first of them is the KMO and Bartlett's test. This test explores the data appropriateness for factor analysis by assessing the sample adequacy and validity. The result is presented in table 1.

Table 6.2: KMO and Bartlett's Test

| | | |
|--|--------------------|---------|
| Kaiser-Meyer-Olkin Measure of Sampling Adequacy. | | .664 |
| Bartlett's Test of Sphericity | Approx. Chi-Square | 1.035E3 |
| | Df | 153 |
| | Sig. | .000 |

Source: Author's computation, 2022

The sampling adequacy test results show that the KMO coefficient is 0.664. since this value is greater than 0.5, this confirms that the sampling size for this survey is adequate and enough for the analysis. The Bartlett sphericity test is also significant, indicating that the instruments are

dependent and related, thus necessitating the application of the EFA. The results from the two test is a good fulfilment of one of the important preconditions for applying factor analysis.

6.4.4 Communalities test

The test shows the level of degree of association of the constructs with one another. In other words, it indicates the level of correlation between each construct. For the application of factor analysis to be possible, there must be commonalities among the variables. The result from each construct shows extraction values that are approximately mostly above 0.5, indicating the existence of commonality among most of the constructs. Only one output of the 18 constructs for the FMBS has an extraction of 0.42 which is still in order.

Table 6.3: Communalities test

| | Initial | Extraction |
|---|---------|------------|
| Comparison shopped when purchasing a product or service | 1.000 | .570 |
| Paid all your bills on time | 1.000 | .526 |
| Kept a written or electronic record of your monthly expenses | 1.000 | .589 |
| Stayed within your budget or spending plan | 1.000 | .610 |
| Paid off the credit card balance in full each month | 1.000 | .572 |
| Maxed out the limit on one or more credit cards | 1.000 | .469 |
| Made only minimum payments on a loan | 1.000 | .610 |
| Began or maintained an emergency savings fund | 1.000 | .487 |
| Saved money from every paycheck | 1.000 | .559 |
| Saved for a long-term goal such as a car, education, home, etc. | 1.000 | .571 |
| Contributed money to a retirement account | 1.000 | .720 |
| Bought bonds, stocks, or mutual funds | 1.000 | .657 |
| Maintained or purchased an adequate health insurance policy | 1.000 | .595 |

| | Initial | Extraction |
|---|---------|------------|
| Maintained or purchased adequate property insurance like auto or homeowners insurance | 1.000 | .561 |
| Maintained or purchased adequate life insurance | 1.000 | .544 |
| I usually have a separate budget for religious activities, e.g. Tithes and offering | 1.000 | .565 |
| There is often a separate budget for social events | 1.000 | .623 |
| Saved money and even borrowed to finance sociocultural events | 1.000 | .551 |
| Extraction Method: Principal Component Analysis. | | |

Source: Author's computation, 2022

A result from table 2 generally shows a very high degree of commonality among the constructs for the FMBS; hence, they are fit to be explored using the factor analysis.

6.4.5 Principal component analysis

Given the nature of the FMBS, which also has five sub-scales, namely; Cash Management Sub-scale CMS, Credit Management Sub-scale CRMS, Saving and Investment Sub-scale SIS, Insurance Sub-scale IS, and Socio-Cultural Beliefs Management Subscale (SCBMS), it is important that assessment of how these constructs load into the factors be carried out. There are a total of 18 constructs which are grouped under five sub-scales that measure the FMBS. How these constructs load into various factors is explained in Table 6.4.

Table 6.4 Principal component analysis

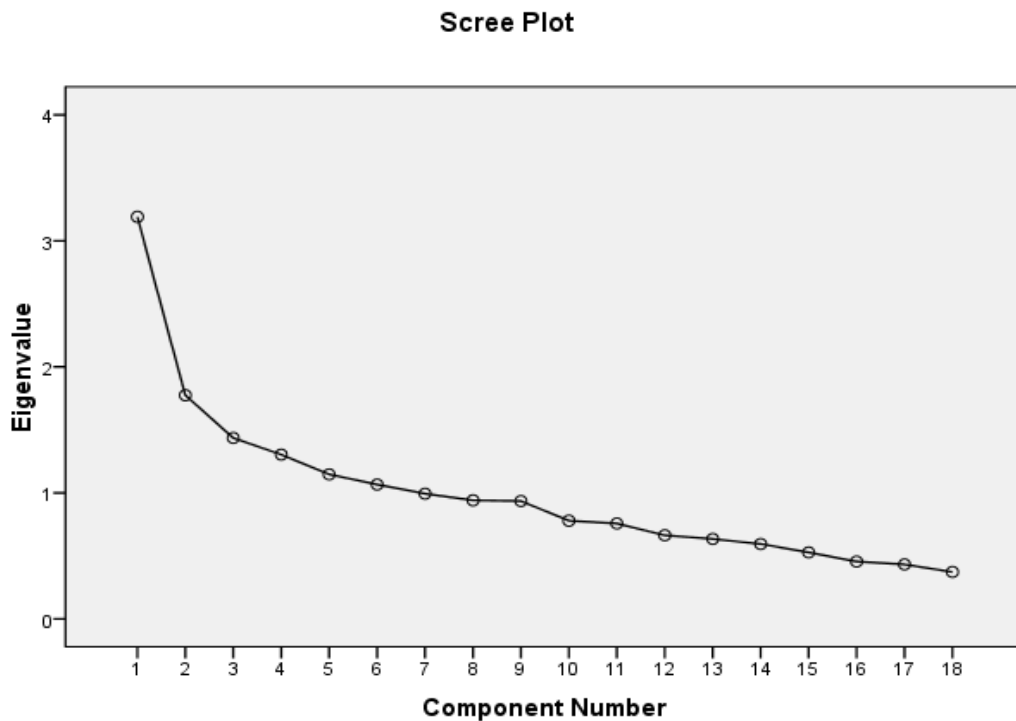
| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|-----------|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 3.191 | 17.727 | 17.727 | 3.191 | 17.727 | 17.727 | 1.986 | 11.033 | 11.033 |
| 2 | 1.775 | 9.861 | 27.588 | 1.775 | 9.861 | 27.588 | 1.958 | 10.878 | 21.911 |
| 3 | 1.436 | 7.977 | 35.564 | 1.436 | 7.977 | 35.564 | 1.807 | 10.038 | 31.948 |
| 4 | 1.304 | 7.243 | 42.807 | 1.304 | 7.243 | 42.807 | 1.576 | 8.754 | 40.702 |
| 5 | 1.147 | 6.370 | 49.177 | 1.147 | 6.370 | 49.177 | 1.344 | 7.464 | 48.166 |
| 6 | 1.066 | 5.921 | 55.098 | 1.066 | 5.921 | 55.098 | 1.248 | 6.932 | 55.098 |
| 7 | .993 | 5.518 | 60.616 | | | | | | |
| 8 | .941 | 5.227 | 65.843 | | | | | | |
| 9 | .935 | 5.194 | 71.037 | | | | | | |
| 10 | .779 | 4.328 | 75.365 | | | | | | |
| 11 | .757 | 4.205 | 79.570 | | | | | | |
| 12 | .663 | 3.683 | 83.253 | | | | | | |

| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | | Rotation Sums of Squared Loadings | | |
|--|---------------------|---------------|--------------|-------------------------------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 13 | .634 | 3.524 | 86.777 | | | | | | |
| 14 | .594 | 3.302 | 90.079 | | | | | | |
| 15 | .528 | 2.931 | 93.010 | | | | | | |
| 16 | .455 | 2.526 | 95.535 | | | | | | |
| 17 | .432 | 2.398 | 97.934 | | | | | | |
| 18 | .372 | 2.066 | 100.000 | | | | | | |
| Extraction Method: Principal Component Analysis. | | | | | | | | | |

Source: Author's computation, 2022

Results from table 6.4 show that there are six factors created. This indicates that the initial Eigenvalues of these six factors are more significant than one. How the constructs load into each of the six factors is explored under the factor analysis. The existence of six factors is further shown on the scree plot below.

Figure 6.1 Scree Plot



Source: Author's computation, 2022.

The scree plots further support the existence of six factors. The implication is that all 18 constructs are loaded under the six factors. From the scree plot factor, six is the least value closer to an eigenvalue of one other factor from seven below the eigenvalue of one.

6.4.6 ROTATED COMPONENT ANALYSIS

The rotated component analysis describes how the 18 constructs load into each of the six factors. The varimax approach is applied in the rotation of component analysis which is excellent when

the factors are known to be orthogonal. It would be recalled that five sub-scales are identified for the FMBS, and they are all measured with different constructs.

For instance, four constructs, namely (i) comparison shopping when purchasing a product or service, (ii) paying all your bills on time, (iii) keeping a written or electronic record of your monthly expenses, and (iv) staying within your budget or spending plan are used to describe the first domain or sub-scale of the FMBS, called the Cash management scale CMS. The result from the EFA shows that only “paid all bills, “stayed within budget sending plan”, and “paid off the credit card balance in full each month” (a construct originally designed to measure credit management sub-scale in the research instrument), are loaded under the same factor (component 4) and have good reliability result. The remaining two constructs, namely (i) “comparison shopped when purchasing a product or service” and (ii) “kept a written or electronic record of your monthly expenses”, are loaded under different factors. When they were included in the reliability test, they lowered the Cronbach alpha value.

Again, in the research instrument, the second sub-scale is the credit management sub-scale CRMS and three constructs, namely measure it (i) “Paid off the credit card balance in full each month, (ii) “maxed out the limit on one or more credit cards, and (iii) “made only minimum payments on a loan.” However, the result of the factor analysis indicates that (i) “Paid off the credit card balance in full each month,” (ii) “kept a written or electronic record of your monthly expenses which was a construct designed initially for cash management sub-scale”, (iii) “maxed out the limit on one or more credit cards”, and (iv) “saved money and even borrow to finance socio-cultural events”, a construct developed for socio-cultural beliefs management sub-scale SCBMS, are loaded under the same factor (component 5), and describe the credit management sub-scale. Therefore, the reliability test result is also appropriate.

Furthermore, the saving and investment sub-scale SIS is measured in the research instruments by five constructs, namely (i) “began or maintained an emergency savings fund, (ii) saved money from every paycheck, (iii) saved for a long-term goal such as a car, education, home, etc., (iv) contributed money to a retirement account, and (v) bought bonds, stocks, or mutual funds”. The factor analysis result confirmed that all these five constructs are loaded under the same factor (component 3) and with impressive reliability test results.

Another sub-scale in the FMBS is the Insurance sub-scale IS. In the research instrument, the sub-scale is measured by three constructs, namely (i) “maintained or purchased an adequate health insurance policy, (ii) maintained or purchased adequate property insurance like auto or homeowners insurance, and (iii) maintained or purchased adequate life insurance.” Results from the EFA also indicate that all three are loaded under the same factor (component 2), and they also yield impressive reliability test results.

The last sub-scale in FMBS is the Socio-Cultural Beliefs Management Sub-scale (SCBMS). It should be noted that this sub-scale is added to the existing sub-scale in the literature to domesticate the FMBS in Africa since the existing sub-scales of FMBS were developed for non-African countries. Three constructs are used to measure this sub-scale, namely (i) “I usually have a separate budget for religious activities, e.g. tithe and offering, (ii) there is often a separate budget for social events”, and (iii) “saved money and even borrowing to finance socio-cultural events.” Results from the factor analysis also show that the three constructs are loaded under factor one (component 1) and indicate good reliability tests.

6.4.7 RELIABILITY TEST FOR THE SUB-SCALE

The discussions under the factor analysis have shown that there is a need for the re-adjustment and regrouping of some constructs in the research instrument as they measure each of the five sub-scale. Therefore, the sub-scales amended constructs and the reliability tests are shown in the table below.

Table 6.5: Reliability test for sub-scale a and their constructs

| S/N | Sub-scale | Constructs | Cronbach's Alpha |
|-----|----------------------------------|--|------------------|
| 1 | Cash Management Sub-scale CMS | Paid all your bills on time | 0.694 |
| | | Stayed within your budget or spending plan | |
| | | Paid off the credit card balance in full each month | |
| 2 | Credit Management Sub-scale CRMS | Kept a written or electronic record of your monthly expenses | 0.779 |
| | | Maxed out the limit on one or more credit cards | |

| S/N | Sub-scale | Constructs | Cronbach's Alpha |
|-----|--|---|------------------|
| | | Paid off the credit card balance in full each month | |
| | | Saved money and even borrowed to finance sociocultural events | |
| 3 | Savings and Investment Sub-Scale SIS | Began or maintained an emergency savings fund | 0.795 |
| | | Saved money from every paycheck | |
| | | Saved for a long-term goal such as a car, education, home, etc. | |
| | | Contributed money to a retirement account | |
| | | Bought bonds, stocks, or mutual funds | |
| 4 | Insurance Scale | Maintained or purchased an adequate health insurance policy | 0.735 |
| | | Maintained or purchased adequate property insurance like auto or homeowners insurance | |
| | | Maintained or purchased adequate life insurance | |
| 5 | Socio-Cultural Beliefs Management Subscale (SCBMS) | I usually have a separate budget for religious activities, e.g. Tithing and offering | 0.702 |
| | | There is often a separate budget for social events | |
| | | Saved money and even borrowed to finance sociocultural events | |

Source: Author's computation, 2022

The result from table 5.5 shows the amended constructs and their sub-scale. In addition, the reliability test via the Cronbach Alpha test shows that all the coefficients are approximately 7.0 and above, which is a suitable yardstick for measuring the appropriateness of the constructs concerning their respective sub-scales.

Some salient adjustments were made to the composition of the constructs and the sub-scale, especially in the area of the constructs that describe the cash management sub-scale where a construct, namely "Paid off the credit card balance in full each month" describes the cash management sub-scale although it was on the construct of credit management sub-scale. This

implies that the respondents believe that settling their debts immediately as and when due is an important factor determining their cash management. On the other hand, a construct, namely “Comparison shopped when purchasing a product or service”, failed to describe the cash management sub-scale as it remains the only outlier construct among all the 18 constructs that did not describe any of the five sub-scales.

Again, another important adjustment is shown under the credit management sub-scale where a construct “Saved money and even borrow to finance socio-cultural events “, which is meant to describe the socio-cultural beliefs sub-scale, is found to describe the credit management sub-scale. This construct was loaded under the same factor as other constructs that describe credit management. This implies that the respondents that when they borrow for social functions and other social-related activities, it affects their credit management as well.

Apart from these two adjustments, all other constructs are used to measure each sub-scale as a state on the research instruments loaded appropriately and give acceptable reliability results. Finally, the five sub-scales for the FMBS are developed based on the adjustment necessitated by the factor analysis.

6.4.8 DESCRIPTIVE STATISTICS OF THE SUB-SCALES

The descriptive statistics of the sub-scale are presented in table 6.6. This enables the study to identify the extent to which each sub-scale is practised among the respondents and further explore the respondents' responses regarding the sub-scales distribution.

Table 6.6: Descriptive analysis of the FMBS Sub-scales

| Sub-scale | Mean | Std Deviation | Percentages of Often or Always |
|---|--------|---------------|--------------------------------|
| Cash Management Sub-Scale CMS | 3.3532 | .87791 | 47.8% |
| Credit Management Sub-Scale CRMS | 2.9688 | .84722 | 24.9% |
| Savings and Investment Sub-scale SIS | 3.0779 | .77672 | 27.6% |
| Insurance Sub-scale SIS | 2.8130 | .93058 | 23.6% |
| Socio-Cultural Beliefs Management Sub-scale (SCBMS) | 2.9766 | .99319 | 30.9% |

Source: Author's computation, 2022

Results in table 6.6 further explore the respondents' responses on the five sub-scales. The result shows that the cash management sub-scale is the most practice or often done by them. The implication is that the respondents are very conscious of their cash management behaviours in their financial commitments. The percentage of both “often and always” is about 47%, and the implication is that the remaining 53% are shared among never, sometimes, and seldom. The mean of the cash management sub-scale, 3.3532, is also the highest of the subscales. This is in tandem with the frequency with which each respondent practices all the items listed under the cash management sub-scale as a construct. Regarding variance, the standard deviation of CMS is 0.87791. The value is closer to the minimum limit of 1.0 than the maximum limit of 5.0, thus implying that there is not much variance among the respondents' responses regarding the cash management sub-scale.

For the credit management sub-scale, the result from the table shows that it is one of the least practices on the sub-scale with the “often/always” of 24.9%. The implication is that they seldomly, never, or sometimes practice all the items listed as constructs under the credit management sub-scale. The mean of 2.9688 also follows the same pattern, showing one of the least means among the sub-scales. Activities such as paying off credit in full, and Maxing out the limit on one or more credit cards, among others, appear not frequently practised by the respondents.

The savings and investment sub-scale is the third most practised among the five sub-scales after cash management and socio-cultural beliefs management. The percentage of both “always and often” is about 27%, and the mean is 3.0779, which also justifies the position among the sub-scales. The variance is .77672 showing that there is not much dispersion in the respondents' responses on savings and investment sub-scales.

The insurance sub-scale appears to be the least practised among all the five sub-scale. The often and always response is 23.6% making it the least practised among the five. The mean also gives a value of 2.8130, indicating that the Insurance Sub-Scale has the least mean among the five. The variance of .93058 is also low. Although higher than the previous four variances, it is still closer to the minimum than the maximum limit.

The last sub-scale is the Socio-Cultural Beliefs Management (SCBMS) and is the second most practised among the five sub-scales. It has a percentage and means of 30.9% and 2.9766, respectively, making it the second most frequently done activity among the sub-scales. The variance of .99319 remains the highest among the five, yet it is closer to the lower limit of 1 than the upper limit of five.

6.4.9 THE FMBS SCALE

The FMBS scale is computed using the principal component analysis (Factor analysis) approach, and the values from the computation range between -2 and +2. The FMBS is generated from the five sub-scales, namely Cash Management Sub-scale, Credit Management Sub-scale, Savings and Investment Sub-scale, Insurance Sub-scale, and Socio-Cultural Beliefs Sub-scale. The next task is to perform some validity tests on the FMBS to know the extent to which the scale can be relied upon.

6.4.9.1 FMBS Descriptive

The FMBS scale was developed via principal component analysis, and the description is shown in table 6.7.

Table 6.7: Descriptive Statistics I of the FMBS

| Categories of FMBS | Class Interval | Lower Limit | Upper Limit | Frequency | Percentage |
|-------------------------|----------------|-------------|-------------|-----------|------------|
| Very Irresponsible FMBS | -2.0 to -1.5 | -2 | -1.5 | 46 | 11.9 |
| Irresponsible FMBS | -1.49 to -0.99 | -1.49 | -0.99 | 157 | 40.8 |
| Responsible FMBS | 0 to 1.49 | 0 | 1.49 | 182 | 47.3 |
| Very responsible FMBS | 1.5 to 2.00 | 1.5 | 2 | 0 | 0% |
| Number Observations | 385 | 385 | 385 | 385 | 385 |

Source: Author’s computation, 2022

The FMBS scale is generated, and it ranges between -2 and +2. The negative values show irresponsible financial management behaviour. Out of the 385 participants, 46, which represents 11.9 per cent, gave responses that show very irresponsible FMBS, while 157, which is about 40.8 per cent, gave answers that show irresponsible FMBS. Notwithstanding, 182 of the participants, about 47.3 per cent, have responsible FMBS, and none have very responsible FMBS. Generally,

the results of the FMBS show that about 52.7 per cent of the population participants are financially irresponsible, while about 47.3 per cent have responsible financial management behaviour.

The descriptive analysis of the FMBS to further show the distribution of the FMBS among the participants is shown in table 6.8.

Table 6.8: Descriptive Statistics II of the FMBS

| <i>Descriptive Statistics</i> | |
|-------------------------------|--------------|
| Mean | -1.18701E-07 |
| Standard Error | 0.050964713 |
| Median | -0.250431 |
| Mode | 1.232891 |
| Standard Deviation | 0.999999879 |
| Minimum | -1.733754 |
| Maximum | 1.232891 |
| Number of observation | 385 |

Source: Author's computation, 2022.

The mean of the FMBS is.18701E-07, which shows a value closer to the minimum limit of -1.733754. The maximum limit is 1.2, which is farther from the mean than the lower limit. It thus implies average FMBS of the participants is low. In addition, the variance is 0.999999879, which is conversely closer to the maximum limit than the minimum limit. Thus representing a high variance across the number of observations. Shows that the distributions of the responses that culminated in the computation of the FMBS are relatively dispersed regarding the number of observations.

6.4.9.2 FMB Scale Validation

However, a scale that will represent the financial management behaviour of individuals needs to pass through some stages of validation to generate acceptability among the readers of this research

report. Therefore, both reliability and validity tests using different approaches are embarked upon under this section to attend to some validation concerns of the FMBS.

6.4.9.3 FMBS reliability test

Firstly reliability test is carried out on the FMBS using the Cronbach Alpha test, and the results are presented in Table 6.9.

Table 6.9: Reliability Test for the FMBS

| Variable | Cronbach's Alpha |
|----------|------------------|
| FMBS | 0.779 |

Source: Author's computation, 2022

Results from the analysis show that the FMBS has reliable Cronbach Alpha statistics of 0.779. It is widely believed that any value from 0.7 and above is regarded as a good reliability status for the variable in question. Consequently, the FMBS computed from the Sub-scales shows reliable statistics, indicating that it can measure what is supposed to measure consistently.

6.4.9.4 FMBS Validity

Different approaches are used for the validity, and the first is the construct validity of the Financial Management Behaviours Scale FMBS.

6.4.9.4.1 Construct Validity

This aspect of validity examines the convergence between the measure of the constructs and the FMBS. It should be noted that 18 items or constructs are developed for this scale, categorized under five sub-scales. The construct validity examines and ensures that the FMBS measures what it supposes or claims to measure (Cohen and Swerklik, 1999; Silva, 1993). The construct validity ensures that the inference drawn from the scale is sound. However, the construct validity is examined in this section using convergent validity. This is where the scale shows some degree of association with the constructs or sub-scales used to develop it (Cohen and Swerklik, 1999; Silva, 1993). This is done to assess the extent to which the 18 constructs and the sub-scales alone measure the FMBS. The FMBS is computed via principal component analysis from the five sub-scale. Therefore, investigation of the relationship between each sub-scale and the extent to which they

explain the FMBS is a critical validity approach for the FMBS. The weighted least square regression is applied to the estimation due to the possibility of a heteroscedasticity problem. The weighted least square regression begins with the test for heteroscedasticity, and the result is presented in Table 6.10.

Table 6.10: Breusch-Pagan / Cook-Weisberg test for heteroscedasticity for FMBS

| Statistics | Hetest | Hetestiid | Hetestfstat |
|-----------------------|---------------|------------------|--------------------|
| chi2(1) | 9.82 | 11.31 | 11.59 |
| Prob > chi2 | 0.0017 | 0.0008 | 0.0007 |
| Ho: Constant variance | | | |

Source: Author’s computation, 2022

The result in table 6.10 indicates that the Null hypothesis is rejected; hence, it is concluded that the variance of the error term is not constant for all observations. This shows that it accepted the presence of heteroscedasticity in the analysis; therefore, if ordinary least square regression is applied, it will lead to unreliable results. Thus, the development has paved the way for using the weighted least square regression. The result is presented in Table 6.11.

Table 6.11: Weighted Least Square WLS regression result for the FMBS and the Sub-Scales

| Variable | Coefficient “b” /Standard Error “SE” |
|--------------------------------------|---|
| Intercept | -1.713562*** (0.1689324) |
| Cash Management Sub-scale CMS | .1571282*** (0.0411996) |
| Credit Management Sub-scale CRMS | 0.986761*** (0.0445944) |
| Savings and Investment Sub-scale SIS | 0.0056839** (0.0009026) |

| Variable | Coefficient “b” /Standard Error “SE” |
|---|--------------------------------------|
| Insurance Sub-scale IS | -0.03959 (.0336789) |
| Socio-Cultural Beliefs Management Sub-scale SCBMS | 0.2085738*** (0.0424056) |
| R Square | 0.7840 |
| Adjusted R Square | 0.7785 |
| Prob > F | 0.0000*** |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,*

Source: Author’s computation, 2022.

A result from table 6.11 shows the relationship and the impacts on each sub-scale on the FMBS. The result implies that four of the five scales have a significant relationship with the FMBS: Cash Management Sub-scale CMS, Credit Management Sub-scale CRMS, Savings and Investment Sub-scale SIS, and Socio-Cultural Beliefs Management Sub-scale SCBMS. However, only Insurance Sub-scale IS failed to have a significant relationship with the FMBS. All of them also exhibited a positive relationship with the FMBS,

The coefficient of CMS in the above table is .1571282, which is statistically significant at 1%, showing that cash management exhibits a positive and significant relationship with responsible financial management behaviour. It implies that good cash management improves responsible financial management behaviour by about .1571282. This indicates that cash management is an important aspect of financial management behaviour.

The credit management sub-scale is the next, showing a coefficient of 0.986761 which is also significant at 1%. Similarly, the result indicates that the credit management sub-scale is an important aspect of financial management behaviour. The positive or direct relationship between them suggests that improved credit management is a promoter of responsible for financial management behaviour.

The saving and investment sub-scale shows a coefficient of 0.0056839 and is also statistically significant at 5%, indicating that positive saving and investment behaviour improves responsible

financial management behaviour. Like the two previous sub-scales, the result again shows that savings and investment management are important measures of FMBS.

Unlike others, it is obvious that the Insurance sub-scale might not be a good measure of financial management behaviour among the respondent samples. This is because its coefficient of -0.03959, apart from being negative, is also not statistically significant, thus showing that the sub-scale of insurance might not measure the financial management behaviour of the sets of respondents very well.

The last sub-scale is the Socio-Cultural Beliefs Management Sub-scale SCBMS with a coefficient of 0.2085738 which is statistically significant at a 1% significance level. The implication is that good management of socio-cultural beliefs promotes good and responsible financial management behaviour. It should be noted that this scale is a different scale by the study and has not been used among the FMBS scale in any previous study. Nevertheless, the result from the construct validity of the FMBS has shown that the sub-scale is justified.

Similarly, the R square is 0.78, thus implying that the sub-scales explained about 78% variation in the FMBS. This is an outstanding value of the R square, and it affirms the validity of the FMBS, especially the extent to which the sub-scales described the FMBS. In addition, the F test, which indicates the overall significance of the regression model, showed a probability of the F test to be 0.000. This implies that the estimated regression model is significant; hence, the relationship between the FMBS and the sub-scales is significant.

The general implication of these results regarding the construct validity is that there is a good and high level of association or high degree of relationship between the FMBS and the 18 constructs. Again, it indicates a good relationship between the FMBS and the sub-scales used to develop the FMBS.

The result shows that the level of convergence validity between the FMBS and the constructs is imposing, indicating that the FMBS is valid and measures what is supposed to be measured. This result is termed remarkable convergence validity, and it greatly boosts the confidence level in the computed FMBS in this study, especially by introducing a new sub-scale of Socio-Cultural Beliefs Management Sub SCBMS, which has boosted the explanatory power of the sub-scale. In some previous studies, it was noted that the R square in those studies ranges between 0.5 and 0.6

compared to the R square of more than 0.7 obtained from this study. The convergence validity of the FMBS appeared to have been boosted with the inclusion of this new sub-scale.

6.4.9.4.2 Criterion Validity

This assesses the extent to which the FMBS predicts variables among the 18 constructs that will be expected ordinarily to predict under normal circumstances. Two items under the 18 constructs are picked and are regressed on the FMBS using the weighted least square regression approach. The first construct examined is the ability of the respondents to stay within their budget in a month. It is widely believed that if an individual stays within their budget in a month, it can be termed a good attribute of responsible financial management behaviour.

The results between “Stay within my budget in a month” and the FMBs are presented in Table 6.12 using the WLS approach.

Table 6.12 WLS of FMBS and “Stayed within budget”

| Variable | Coefficient/Standard Error |
|----------------------|----------------------------|
| Constant | -.426** (.154) |
| Stayed Within Budget | .121** (.041) |
| R square | 0.56 |
| F stat probability | 0.004 |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,*

Source: Author’s computation, 2022.

It is believed that if an individual stays within their budget for a month, it is a good symptom of responsible financial behaviour. This is because an individual that stays within his budget often will have less penchant for financial fraud. The result in table 11 has shown that there is a positive and significant relationship between this variable, that is and FMBs. The coefficient is 0.121, which implies that this will improve responsible financial management behaviour by about 0.121. Furthermore, the F statistics result shows that the model is statistically significant, which thus

means that this construct is an excellent criterion to measure FMB as it has predicted FMBS very well.

The following criterion used measures how well the respondents' extent of debt predicts FMBS; the results are presented in Table 12. The construct used is “paid off credit balance in full.”

The results between “Paid off credit balance in full monthly” and the FMBs are presented in table 6.13 using the WLS approach.

Table 6.13 WLS of FMBS and “Paid off the credit card balance in full each month.”

| Variable | Coefficient/Standard Error |
|---|----------------------------|
| Constant | -.244** (.156) |
| Paid off the credit card balance in full each month | .069** (.011) |
| R square | 0.53 |
| F stat probability | 0.006 |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,*

Source: Author’s computation, 2022.

The result in Table 6.13 explains the prediction of FMBS by the respondents' debt volume. The extent of debt is proxy by the construct “Paid off the credit card balance in full each month” it is believed that the tendency to always pay off the credit card balance in full at the end of every month is an indication of how indebted a person is, result from the table has shown that the coefficient is 069. It is statistically significant at 5%, thus indicating that this construct is a good predictor of FMBS and that there is a positive and meaningful relationship between them. It implies that an improvement in paying off credit balance at the end of every month is a good attribute of responsible financial management behaviour.

6.4.10 Discussion of findings on FMBS of the administrators

The result from the FMBS analysis and the sub-scale yielded some results that are different in some areas from the results of some previous empirical studies. Notwithstanding, some of them are similar as well. For instance, an important instrument designed to measure the credit management sub-scale called “paid off the credit card balance in full each month” was also loaded under the cash management sub-scale. This implies that the ability of the sampled administrators to pay their in full loans every month ends also has a strong relationship with their cash management ability. Although this was different from what xiao and Dew (2015) obtained in their study, the reason might not be unconnected with the sets of respondents that were used while they used households in the US.

Furthermore, this study used administrators in the Federal Government SOEs in Nigeria. Therefore, apart from a difference in the two countries economies, the occupation and other characteristics of the respondents used in the two studies are different. These are bound to influence their cash management ability and factors that affect their cash management.

Again, during the analysis of the sub-scales, it was found that an instrument, namely, “Saved money and even borrow to finance socio-cultural events”, which is originally designed to measure Socio-cultural beliefs management sub-scales, was also loaded under the credit management sub-scale. The result showed that the respondent's tendency to borrow for socio-cultural events also describes their credit management ability. It should be noted that the Sociocultural beliefs management sub-scales are the new sub-scale added to the existing four sub-scales in the previous study by xiao and Dew (2015) to make it five sub-scale. In addition, this new sub-scale has not been used in other similar studies, such as Hilgert, Hogarth, and Beverly (2003). Again, the findings indicate that borrowing for sociocultural events among SOEs administrators has influenced their credit management.

Furthermore, on the new sub-scale added in this study, the “Socio-cultural beliefs management sub-scales (SCBM), " all the results have shown that it is a good addition to the sub-scales and describes the financial management behaviour of the administrators in the SOEs in Nigeria. Instruments such as;

“I usually have a separate budget for religious activities, e.g. Tithe and offering”, “There is often a separate budget for social events”, and “Saved money and even borrowed to finance socio-cultural events.”

all proved to be worthy additions to the factors that measure the financial management behaviour of administrators in this part of the World. As stated earlier, these instruments and the sub-scale have not been used by any previous studies and were used to domesticate the FMBS in the country further. Domestication of the FMBS remains one of the main recommendations in the study of Xiao and Dew (2015) after realising FMBS may be affected by some factors which might be connected with the economy of the country, nature of the job, and other socio, economic or socio-cultural characteristics which might not be captured in their study. It was noticed in the results from the study that the Socio-cultural beliefs management sub-scales (SCBM) also have a very impressive reliability test result, thus showing it to be measuring what is supposed to measure accurately and consistently. It further asserts that the financial management behaviour of the government administrators of the SOEs at the federal level in Nigeria is strongly measured by all the instruments under the SCBM sub-scale.

One of the most astounding results of the study during the analysis of the FMBS is the outcomes of the regularity of practising the five sub-scales. Findings from this show that all the five sub-scales, namely cash management, credit management, saving and insurance management, and socio-cultural belief management, are often practised by the administrators except the insurance management sub-scale. The insurance sub-scale appears to be the least of the five they are often acquainted with. This is very unlike previous empirical studies (Valaskova, Bartosova, and Kubala 2019). The reason behind this is that the attitude of many civil servants and the generality of people in Nigeria towards insurance is very poor. An average Nigerian does not have a single form of an insurance policy. Most vehicle insurance is not genuine (Adebiyi and Adeniji, 2021). These facts have been identified as one of the reasons why the insurance sector in the country remains undeveloped. The only insurance policy standard among the federal civil servants in Nigeria is mandatory health insurance. Most of the civil servants in the SOEs at the state and local government levels do not have active health insurance (Adebiyi and Adeniji, 2021). All these reasons, among others, might have accounted for why the insurance management subscale appears to be the least practised among administrators.

Results from the analysis of the FMBS have further revealed some salient characteristics of the SOE administrators in Nigeria that lead to the following conclusions.

Firstly, the FMBS developed for the administrators in Nigeria has shown that their financial management behaviour is majorly linked to cash management, credit management, savings and investment management, and sociocultural beliefs management approaches. The study discovered that insurance management plays little role in the financial management behaviour of the administrators. This might be why in the previous analysis in this study, insurance management was identified as the least practised by the respondents. This is very different from the studies of (Xiao and Dew 2015), where insurance management played an important role in measuring FMBS. As earlier stated, the reason for this might not be unconnected to the fact that many civil servants in Nigeria only participate in health insurance, which is The majority of the state civil servants do not have any active medical insurance. In addition, many administrators in both federal and state SOEs do not partake in insurance, life insurance, house insurance, and so on. Therefore, it is evident that since the insurance issue is not prioritized in Nigeria, there is little that can affect their financial behaviour.

Secondly, findings from the study have shown that the FMBS scale categorized about 52.7% of the sampled administrators as having irresponsible financial management behaviour. This percentage is high considering the enormity of the financial fraud happening in the public service in Nigeria. The TI (2019) stated that bulk financial mismanagement-related corruption is prevalent in the public service in Nigeria. Suppose about 50% of the administrators in federal SOEs in Nigeria are irresponsible regarding their financial management behaviour. In that case, the report of the TI (2019) is a reflection of the true position of the extent of financial fraud in the Nigerian public service.

Thirdly, one of the novelties of this study is the modification of the sub-scales to include the socio-cultural beliefs sub-scale to domesticate the FMBS within the African setup. Although findings from the analysis have shown that this sub-scale is an important measure of the financial management behaviour of the administrators, it shows that it can be concluded from the study as well that the socio-cultural beliefs of administrators in Nigeria are an essential measure of how financially responsible can administrators can be.

Again, cash management and credit management remain the most crucial measure of the financial management behaviour of the administrators as they have the highest contributions to the financial management behaviour of the sampled administrators. This result is similar to many previous empirical findings where both cash and credit management instruments were identified as the most important measures of FMBS (Valaskova, Bartosova, and Kubala, 2019; Xiao and Dew2011). It implies that those administrators with irresponsible financial management have poor cash and credit management. In the reverse form, it also shows that those administrators with responsible financial management behaviour have been very outstanding in their cash and credit management. Notwithstanding, their savings, investment, and socio-cultural beliefs still play useful roles in measuring the FMBS of these administrators.

6.5 CONCLUSIONS

This chapter has discussed the respondents' demographic features, generally focusing on variables such as age distribution, gender, and years of experience. The response rate was also discussed. However, the main preoccupation of the researcher under chapter five is the analysis of the results of objective one of the studies, which provides an empirical answer to research question one. Results on developing a measure of financial management behaviour for the administrator in the SOEs in Nigeria are presented, analysed and discussed. This is done by constructing a financial management behaviour scale FMBS. All the processes leading to the development of the scale are analysed and discussed in the chapter.

The next chapter focused on the presentation, analysis and discussion of results on the determinants of financial management behaviour.

CHAPTER SEVEN

ASSESSMENTS OF SOME FACTORS THAT DETERMINE FINANCIAL MANAGEMENT BEHAVIOUR OF ADMINISTRATORS IN THE SOES IN NIGERIA

7.1 INTRODUCTION

This chapter focuses on the presentation, analysis and discussion of the results of the study's second objective. Relying on the demographic analysis presented in chapter five, the analysis of the determinants of financial management behaviour of the administrators of the SOEs is done in this chapter. After the computation of the financial management behaviour scale in chapter five, which represents the yardstick for measuring the financial management behaviour of the administrators in the SOEs in Nigeria, the task under this objective and chapter is to analyse those factors that can influence the financial management behaviour of each of the 385 administrators captured under this survey. The methodology and literature review identified the following factors as key determinants of financial management behaviour; Financial Knowledge, Financial Literacy, Locus of control, family size, income, and qualification. Therefore, the extent to which each affects these administrators' financial management behaviour is analysed under this objective.

7.2 PRE-ESTIMATION TEST FOR THE DETERMINANTS OF FMB

The weighted least square regression analysis is also embraced for this analysis, and an important condition is the problem of heteroscedasticity in the data. The results of the heteroscedasticity test are presented as follows;

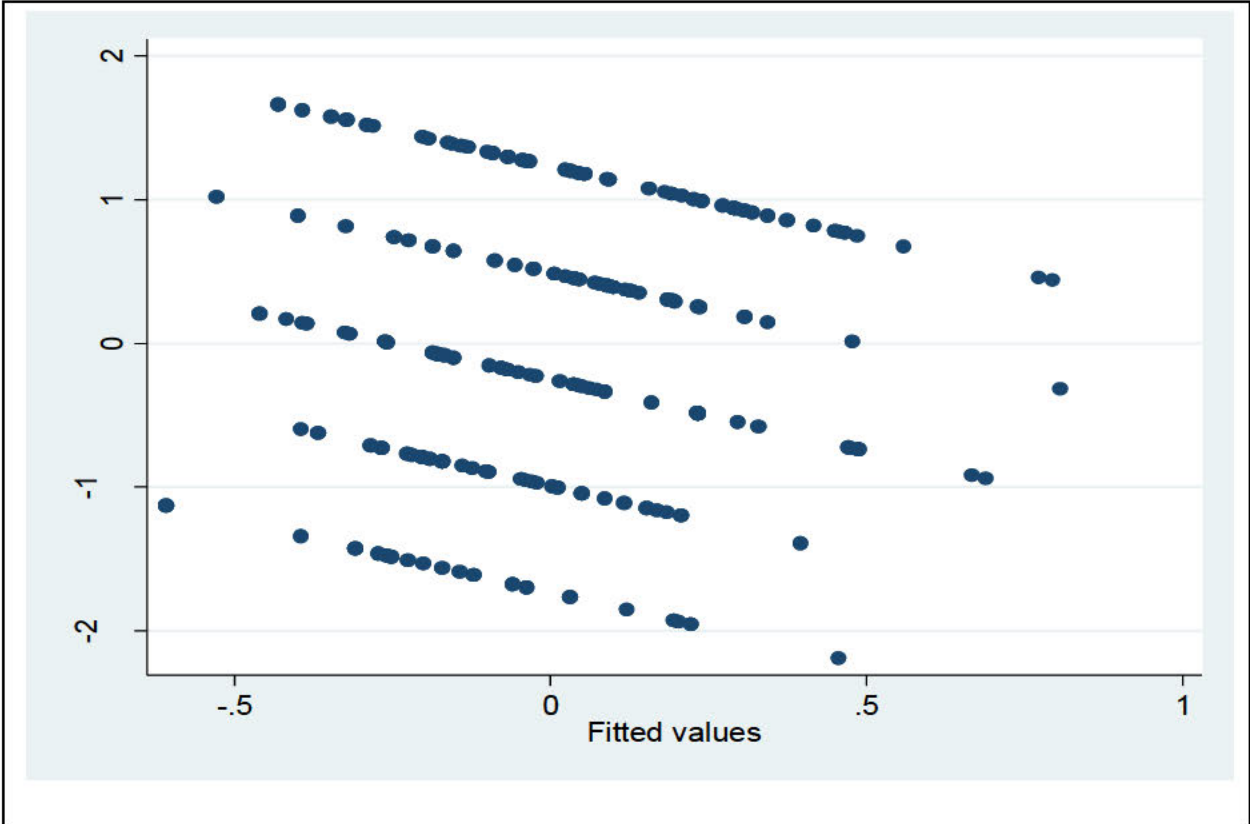
Table7.1: Breusch-Pagan/Cook-Weisberg test for heteroscedasticity of determinants of FMB

| Statistics | Hetest | Hetestiid | Hetestfstat |
|-----------------------|---------------|------------------|--------------------|
| chi2(1) | 2.17 | 4.15 | 4.17 |
| Prob > chi2 | 0.1411 | 0.0416 | 0.0417 |
| Ho: Constant variance | | | |

Source: Author's computation, 2022

For the avoidance of doubts, three different methods are used to test for heteroscedasticity in the data, and the results show that the H0 is accepted in just one of the three tests. The implication is that the conclusion that there is no constant variance in the residual distribution is accepted in two of the tests, indicating the presence of heteroscedasticity. Furthermore, the graph of the residuals shown in figure 7.1 indicates that the variance of residuals is not constant.

Figure 7.1 Graph of the residual variance for the determinants of FMB



Source: Author’s computation, 2022

The scattered plot of the residual variance is an attestation to the fact that there is the presence of heteroscedasticity in the residual of the estimated regression model. This shows a need to run the regression using the weighted least square regression WLS. The presentation of the weighted least square regression result is next.

Table 7.2: Weighted Least Square WLS regression result for the determinants of FMB

| Variable | Coefficient “b” /Standard Error “SE” |
|---------------------|---|
| Intercept | 2.081332*** (0.777905) |
| Financial Knowledge | -.1680626*** (.0420039) |
| Financial Literacy | .2258617*** (.0338269) |
| Locus of control | -.06727 (.0963254) |
| Family size | -.4618663*** (.0863109) |
| Income | -.7020268*** (.1475796) |
| Qualification | -.0546704 (.1316068) |
| R Square | 0.6986 |
| Adjusted R Square | 0.6906 |
| Prob > F | 0.0000*** |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,*

Source: Author’s computation, 2022

Results from table 7.2 show that some factors determine the financial management behaviour of administrators in the SOEs at the federal level in Nigeria. Apart from some demographic factors like family size, income distribution, qualifications, financial literacy, financial knowledge, and locus of control are included as factors that can affect the financial management behaviour of these administrators.

The weighted least square regression results show that financial knowledge has a significant effect on the financial management behaviour FMB of the administrators. The coefficient is -.1680626,

and it is statistically significant. The implication is that there is a negative and significant relationship between FMBS and financial knowledge. Furthermore, it shows that having a good understanding of basic finance-related disciplines such as corporate finance, banking, finance, and investment finance, among others, might not positively influence an administrator's financial management behaviour.

On the contrary, financial literacy has a coefficient of 0.2258617, and it is statistically significant at 5%, thus implying that financial literacy has a positive effect on the financial management behaviour of the administrators. The implication is that if you have either formal or informal ideas of basic finance-related disciplines such as corporate finance, banking, finance, and investment finance, among others, it can make you more responsible in managing your finance. While Financial knowledge is about a deep understanding of these disciplines, literacy is talking about the idea of them, either formal or informal. Therefore, more administrators are likely going to be literate than knowledgeable financially. This difference might account for the difference in their impacts on the FMB of the administrators.

Locus of control failed to influence the FMBS significantly among the non-demographic factors. It has a coefficient of -0.06727, and it is not statistically significant at 5%, thus showing the locus of control as the on-important factor that can determine the financial management behaviour of administrators in SOEs in Nigeria.

Family size is one of the administrators' demographic features that significantly impact their FMB. It has a coefficient of -0.4618663, and it is statistically significant at 5%, thus showing a significant negative relationship between family size and the FMB of the administrators. It simply implies that the larger the family size, the less responsible financially an administrator will be. It further indicates that an increase in family size is an essential factor that causes irresponsible financial management behaviour among the administrators in the SOEs in Nigeria.

Another demographic feature used in the model is the administrators' income distribution, which has a coefficient of -0.7020268 which is also statistically significant at 5%. This is an indication that there is an essential negative relationship between income distribution and the FMB of the administrators. The higher the income level, the less financially responsible the administrators are likely to be. This may look bizarre, but it simply shows that the administrators usually show

irresponsible financial management behaviour at the upper echelon of income distribution in the services of the SOEs at the federal level in Nigeria.

The last demographic feature of the administrators used in the model is the qualifications of the administrator, The coefficient is -0.0546704, and it is not significant at the 5% level of statistical significance. The implication is that qualification is not an important factor determining the financial management behaviour of administrators in SOEs. There appears to be some consistency in the results as financial knowledge previously showed that it does not have a significant positive impact on the financial management behaviour of the administrators as well.

Notwithstanding the general note, the R square of the model that describes the determinants of the FMB has an impressive R square of 0.6986 which shows that about 70% systemic variation in FMBS of each administrator is explained by the factors identified in the model. The F significance also confirms that the estimated model of the determinant of the FMBs is significant at a 1% level. This further ensures the explanatory strength of the predictors: the factors that determine the FMB of the administrators in the SOEs at federal service in Nigeria.

7.3 POST-ESTIMATION TEST FOR THE ESTIMATED MODEL OF DETERMINANTS OF FMBS

After the regression estimation, the WLS and the heteroscedasticity test were again conducted, and the graphical illustration is shown in Figure 7.2.

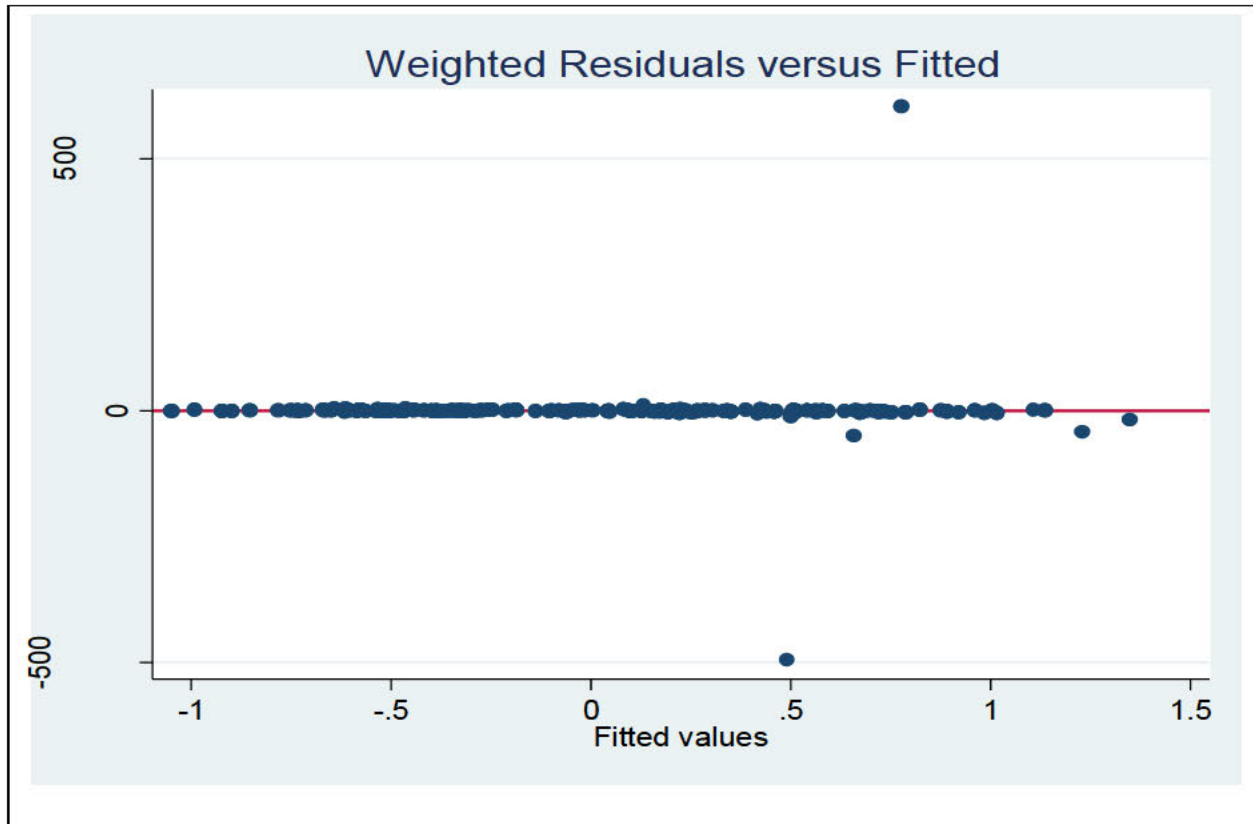


Figure 7.2: Test of Heteroscedasticity of the Estimated Model of Determinants of FMBS

Source: Author's computation, 2022

Figure 7.2 explains the test of heteroscedasticity on the estimated model. The graph shows that the variance of the error term is now constant for all the levels of observation. However, the graph in figure 7.2 shows that the residual variance showed scattered dots, indicating that the error term's variance is not constant, which was the reason for applying the WLS. After the estimation of WLS, it is clear that the model showing the determinants of the FMBS is free from the problem of heteroscedasticity.

7.4 DISCUSSION OF THE RESULTS ON THE DETERMINANTS OF FMBS

The analysis of the relationships between FMBS and some factors that determine it has thrown up some very germane lines of discussion. For instance, the result has shown that Financial Knowledge might not influence FMBS positively. The implication is that having a very good knowledge of disciplines related to finance, economics, and accounting does not make an

administrator financially responsible. The finding is a clear picture of the situation in the Nigerian public sector, where the most educated and learned individuals are the most corrupt administrators financially. The findings are similar to the results from the empirical study of (Saidu, Jugu, Ogenyi, and Bodunde, 2020), who concluded that most of the public officers in Nigeria perpetrate their fraudulent acts with connivance with the accountants and the head of finance in their various organisations. Many of these accountants, Bursars, and leaders of finance are with highest degrees in accounting, finance, and economics, both professional and academic. However, the result differs from what was obtained by Asandimitra and Kautsar(2017), where financial knowledge was identified as an important factor that can positively improve financial management behaviour.

The difference in the result might not be unconnected to the fact that while the study used households in India, this study used administrators in the federal government SOEs in Nigeria. Apart from the fact that the participants' professions are different, the environment and the economy where the research was conducted are also different. In addition, according to Akujuobi and Nwezeaku (2015), many financial frauds in government parastatals in Nigeria are traceable to individuals with in-depth knowledge of finance. Therefore instead of the financial expertise to make them more responsible, it is making them more financially irresponsible. Consequently, it can be inferred that their knowledge of finance is used negatively because it gives them more skills in perpetrating financial fraud in their various organisations. For example, the head of the Pension Commission of Nigeria, PENCOM, Abdulrasheed Mina, has degrees in Finance and is a chartered accountant, yet, he was recently prosecuted for embezzling billions of naira in PENCOM. This is just one of the numerous examples of top administrators in Nigeria with in-depth knowledge of finance who were found to be financially irresponsible.

On the other hand, financial literacy has a significant positive impact on FMB. It should be noted that financial literacy might not refer to an in-depth understanding of those finance-related disciplines but just an idea. The implication is that an administrator does not need in-depth knowledge of these disciplines before he is financially responsible. This is evident from the findings of these results where financial literacy, which emphasises just ideas, improves responsible financial management behaviour while having an in-depth understanding (Financial Knowledge) does not. This was a similar result obtained from Ansong and Gyensare's (2018) studies. It follows that just an idea of finance and management is enough to promote sound financial management behaviour in administrators, and not until the individual has all the degrees

in the world in the finance-related field before the person has good financial management behaviour. These findings are very realistic in Nigeria as evidence from the public service has shown that some of the most prudent top administrators in SOEs in Nigeria have turned out to be non-professionals in finance-related disciplines. An example is the current Joint Admission Matriculation Board (JAMB) registrar, Prof. Oloyede, with degrees in Arabic studies, who was commended for revealing all the past financial frauds perpetrated by his predecessor and improving the IGR contribution of JAMB tremendously with the display of sound financial management behaviour Chimezie., Omankhanlen and Eriabie2020).

Family size was also shown from the findings of this study to have a significant impact on FMB. It offers an inverse relationship between family size and financial management behaviour. It follows from the study results that the administrators show that the larger the family size, the more irresponsible financial management behaviour. The study has established that administrators with substantial family sizes are more likely to be financially irresponsible. The study of Gloy (2018) also shows the same result, but the only difference is that their study only showed that family size significantly impacts FMB. However, they were silent if the direction of the relationship because they did not compute the FMBS, which will clearly distinguish between responsible and irresponsible financial management behaviour.

Empirical evidence from more studies, such as Hilgert, Hogarth, and Beverly (2003), is also in line with the conclusion from this study that an individual with vast numbers of dependents are more likely to perpetrate financial fraud than somebody with a small number of dependents. These results are similar, although they used different case studies and classes of respondents from the ones used in this study. This scenario emphasises the relevance of family size among the factors that can affect financial management behaviour. However, from the submissions of Jorgensen (2007), many individuals with irresponsible financial management adduced family pressures as one of the main reasons for displaying some attitudes that connote irresponsible financial management behaviour. Many do not have savings, are overburdened with immense financial depths, and have a deplorable attitude toward an insurance policy. Generally, finding on the relationship between family size and financial management behaviour from this study has shown that administrators with large family sizes are more likely to have poor cash management, credit management, savings, and investment management, among others.

Income is another factor that has been shown to impact the FMB significantly. Findings from this study indicate that there is an inverse relationship that is significant between the two. The study revealed that poverty is one of the most prominent causes of irresponsible financial management behaviour. In addition, the study showed that low income could aid irresponsible financial management behaviour among administrators. The findings conform to much empirical literature in this area (See Mien and Thao 2015). From their conclusions, a poor person will likely have poor cash management behaviour, poor credit management behaviour, and a negative attitude toward savings and investment, among others. All of these are attributed to irresponsible financial management behaviour.

Furthermore, the study of Mudzingiri, Mwamba, and Keyser (2015) emphasised poor credit management behaviour by poor people in that the meagre income leads such individuals to accumulate a series of unpaid loans from many sources hence making such individuals have a considerable debt burden. Therefore, the credit management sub-scale is one of the most important measures of financial management behaviour, as obtained in the previous analysis. Similarly, low income generates a poor attitude to savings and investment. As a result, many administrators at the lower ends of the income distributions might not have made any savings or investments from their income in recent times. This is similar to the position of Mien and Thao (2015), who stressed that the limitation imposed by the meagre income might not allow them to have a good attitude toward savings and investment.

In what can be seen as consistency in the findings of this study, one of the results from the analysis shows that qualification does not play any significant role in FMB. The finding from the study indicates that the qualification of the administrators used in this survey failed to impact their financial management behaviour significantly. It would be recalled that earlier financial knowledge, which showed a deep understanding of finance-related disciplines, does not influence financial management behaviour positively rather, it does negatively. This added to the bulk of empirical literature that has downplayed the importance of education of academic qualifications as determinants of the financial management behaviour of an individual. It is evident from the study that the qualification of the sampled administrators does not have a significant role to play in determining responsibility or irresponsible financial management behaviour.

Finally, with a value of the R square of the determinants of the FMB model, it is clear that these identified determinants namely financial knowledge, financial literacy, family size, income, and qualifications are jointly important factors that can influence the financial management behaviour of the administrators. They both explained about 70% variation in the FMBS of the administrators. The F test similarly showed the same result expressing the estimated model as valid and significant. The result underscores the prominent effect of these variables on the financial management behaviour of administrators in the federal government SOEs in Nigeria.

7.5 CONCLUSION

This chapter presents, analyses and discusses the results on the determinants of financial management behaviour of administrators in the SOEs in Nigeria. The financial management behaviour scale that was developed in the previous chapter is used as a dependent variable why some variables as stated in the introductory aspect of the chapter are used as independent variables. The weighted least square approach as explained under the methodology is used as the estimating technique. The results from the estimation showed the relative effect of each of the independent variables on the financial management behaviour of the administrators.

The next chapter focuses on objective three of the study which is an analysis of the moderating effect of budget slack adoption and analysing of the determinants of budget slack adoption.

CHAPTER EIGHT

INVESTIGATION OF MODERATING EFFECT AND DETERMINANTS OF BUDGET SLACK ADOPTION

8.1 INTRODUCTION

After investigating the determinants of FMBS, the study assesses the moderating effect of the adoption of budget slack on the financial management behaviour of the administrators. In addition, this chapter also analyses the determining factors of budget slack adoption among administrators. More explicitly, one of the major tasks under objective three is to determine if the effect of the determinants of FMBS analysed in the previous objective can be affected if the administrators adopt budget slack. Secondly, this chapter also examines those factors that can determine the adoption of budget slack by the administrators. Thus, the chapter answers both research questions three and four.

8.2 DESCRIPTIVE ANALYSIS OF RESPONSES TO BUDGET SLACK USAGE

Table 8.1 explains the administrators' responses to the application of budget slack to control their financial management behaviour.

Table 8.1: Budget slack usage descriptive

| | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|----------------|-----------|----------|----------------|---------------------|
| No | 152 | 39.5 | 39.5 | 39.5 |
| Yes | 233 | 60.5 | 60.5 | 100.0 |
| Total | 385 | 100.0 | 100.0 | |
| Mean | .6052 | Minimum | .00 | |
| Std. Deviation | .48944 | Maximum | 1.00 | |
| Variance | .240 | | | |

Source: Author's computation, 2022.

Table 8.1 show the descriptive statistics on budget slack usage, and the figures indicate that out of 385 sampled administrators, 233, which is about 60% of the population, used budget slack, while 152, about 40%, do not use or apply budget in their financial management strategy. The figure shows a mean of 0.6052 and a variance of 0.240. The mean is closer to the maximum limit of 1.0 than the minimum limit of 0.00. contrarily the variance is more relative to the minimum limit than the maximum limit. This shows mean percentage of the users of budget slack is relatively high. There is little dispersion in the data and low variance.

8.3 MODERATING EFFECT OF BUDGET SLACK ADOPTION ON EACH DETERMINANT OF BUDGET SLACK AS THEY AFFECT FINANCIAL MANAGEMENT BEHAVIOUR

It would be recalled that six determinants of financial management behaviour were analysed in the previous chapter. The task here is to examine if the effect of each of these determinants on financial management behaviour would have changed or not by adopting budget slack.

8.3.1 Moderating effect of budget slack adoption on the relationship between financial knowledge and FMBS

One of the determinants of FMBS investigated in the last objective is financial knowledge. The effort here is to determine if the adoption of budget slack would have affected the effect of financial knowledge on FMBS. The regression result is presented in Table 8.2.

Table 8.2 Regression results in moderating the effect of budget slack on the relationship between financial knowledge and FMBS

| Variables | Coefficients | Collinearity Diagnostics VIF |
|----------------------|--------------------|------------------------------|
| (Constant) | -.122 (0.152) | |
| Financial Knowledge: | 0.042 (.052) | 2.575 |
| Budget Slack | 0.422** (0.203) | 3.812 |
| FKBS | 0.145** (0.066) | 5.794 |
| | | |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%*

Source: Author’s computation, 2022

The regression results in Table 7.2 show that budget slack has a coefficient of 0.422 and is statistically significant at 5%. The implication is that budget slack adoption has a significant effect on financial management behaviour in the model that explains the role of financial knowledge in the financial management behaviour of the administrators.

In addition, the interactive variable between budget slack and financial knowledge is also statistically significant at 5%, with a coefficient of 0.145. this shows that the moderating effect of budget slack in the relationship between budget slack adoption and financial knowledge is significant. It shows that for financial knowledge to affect FMBS, the role of budget slack is crucial.

However, because of the formed interactive variable, cognizance must be taken off the collinearity problem. The table shows that none of the variance Inflation factors of the predictors is greater than 10. The implication is that the multicollinearity problem is not evident in the estimated regression model. Notwithstanding, further multicollinearity tests are conducted and shown in Table 8.3.

Table 8.3 Test for multicollinearity on the moderating role of budget slack in FMBS and financial knowledge relationship.

| Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-----------|------------|-----------------|----------------------|----------------------|--------------|------|
| | | | (Constant) | Financial Knowledge: | Budget Slack | FKBS |
| 1 | 3.352 | 1.000 | .01 | .01 | .01 | .01 |
| 2 | .386 | 2.946 | .09 | .05 | .06 | .06 |
| 3 | .231 | 3.812 | .11 | .13 | .13 | .08 |
| 4 | .031 | 10.398 | .79 | .81 | .81 | .85 |

Source: Author’s computation, 2022.

Table 8.3 shows that the estimated model is mainly free from the problem of multicollinearity. Firstly the Eigenvalue for all the dimensions is very low except for the first dimension. In addition, all the figures and values of the variance proportions are less than 0.9, including for the first dimension. On this note, it can be agreed that the multicollinearity problem does not affect the estimated regression model results. Therefore, it can be concluded that the adoption of budget slack does have a moderating effect on the relationship between financial knowledge and FMBS.

8.3.2 Moderating effect of budget slack on the relationship between financial literacy and FMBS

Another factor used as a determinant of FMBS is financial literacy. Therefore, the study also analyses the role of the adoption of budget slack on the relationship between financial literacy and FMBS. The regression result is presented in Table 8.4.

Table 8.4: Regression results in moderating the effect of budget slack on the relationship between financial literacy and FMBS

| Variables | Coefficients | Collinearity Diagnostics VIF |
|---------------------|------------------|------------------------------|
| (Constant) | .279 (0.209) | |
| Financial Literacy: | -.081 (0.053) | 2.488 |
| Budget Slack | -0.327 (.262) | 6.328 |
| FLBS | 0.099 (0.069) | 7.120 |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%*

Source: Author's computation, 2022.

The result from table 8.4 indicates that, unlike financial knowledge budgets, slack does not have a significant moderating effect on the relationship between financial literacy and FMBS. The

coefficient of the interactive variable of budget slack and financial literacy is 0.099, and the value is not statistically significant at 5%, thus showing that budget slack has no important role in the rate at which financial literacy affects FMBS.

Similarly, regarding the problem of multicollinearity, the variance inflation factor is all less than ten; hence the problem of multicollinearity is minor in the estimated model. Further test on this is shown in Table 8.5.

Table 8.5 Test for multicollinearity on the moderating role of budgets slack in FMBS and financial Literacy relationship

| Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-----------|------------|-----------------|----------------------|--------------------|--------------|------|
| | | | (Constant) | Financial Literacy | Budget Slack | FLBS |
| 1 | 3.369 | 1.000 | .00 | .00 | .00 | .01 |
| 2 | .456 | 2.719 | .03 | .04 | .03 | .04 |
| 3 | .156 | 4.648 | .10 | .09 | .09 | .13 |
| 4 | .019 | 13.411 | .87 | .86 | .87 | .83 |

Source: Author’s computation, 2022.

Investigation of the role of budget slack in the relationship between financial literacy and FMBS is further suggested for the multicollinearity test, and the result indicates that all the variance proportions in all dimensions are not greater than 0.9. Since this is the situation, the estimated model is not severely affected by the multicollinearity problem. Therefore the conclusion that budget slack adoption does not influence the relationship between financial literacy and FMBS is valid.

8.3.3 Moderating effect of budget slack on the relationship between locus of control and FMBS

Locus of control is another variable used as a factor that can influence FMBS. However, there is a need to examine the effect of the adoption of budget slack on this relationship. The result is presented in Table 8.6

Table 8.6: Regression results in moderating the effect of budget slack on the relationship between locus of control and FMBS

| Variables | Coefficients | Collinearity Diagnostics VIF |
|------------------|-------------------|------------------------------|
| (Constant) | .400 (.181) | |
| Locus of control | -.137** (.053) | 2.395 |
| Budget Slack | -.101 (.234) | 5.137 |
| LCBS | .040 (.070) | 6.413 |

Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%

Source: Author's computation, 2022.

The result is similar to what was obtained under the relationship between FMBS and financial literacy, where budget slack failed to moderate their relationships. The coefficient of the interactive variable of budget slack and locus of control is 0.040, and it is not statistically significant at 5%, thus showing no significant moderating effect of budget slack on the relationship between locus of control and FMBS. Notwithstanding, there is evidence from the model that locus of control can significantly impact FMBS without budget slack playing any significant role.

The variance inflation factor values are all less than ten, thus confirming that the multicollinearity issue does not significantly affect the estimated model. Furthermore, the multicollinearity test is shown in Table 8.7.

Table 8.7 Test for multicollinearity on the moderating role of budgets slack in FMBS and locus of control relationship

| Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-----------|------------|-----------------|----------------------|------------------|--------------|------|
| | | | (Constant) | Locus of Control | Budget Slack | LCBS |
| 1 | 3.368 | 1.000 | .01 | .01 | .01 | .01 |
| 2 | .430 | 2.800 | .04 | .05 | .05 | .05 |

| | | | | | | |
|---|------|--------|-----|-----|-----|-----|
| 3 | .178 | 4.345 | .11 | .11 | .10 | .11 |
| 4 | .023 | 11.973 | .84 | .83 | .85 | .83 |

Source: Author's computation, 2022

All the values of variance proportions are less than 0.9. This is a pointer to the fact that multicollinearity's effect is not severe enough to impact the estimated model. The eigenvalues also are very small. All these attest that the parameter estimates from the estimated regression model are reliable. Therefore, it can be concluded that budget slack adoption again does not have a significant moderating effect on the relationship between locus of control and FMBS.

8.3.4 Moderating effect of budget slack on the relationship between Income and FMBS

It would be recalled that Income was among the most important factors discovered from the previous objective that has a significant effect on FMBS. The analysis under this section investigates if this could have been different if the administrators had adopted budget slack. The result is presented in Table 8.8.

Table 8.8: Regression results in moderating the effect of budget slack on the relationship between Income and FMBS

| Variables | Coefficients | Collinearity Diagnostics VIF |
|--------------|-------------------|------------------------------|
| (Constant) | 0.358 (.205) | |
| Budget Slack | .095 (.270) | 6.874 |
| Income | -.159** (.080) | 2.220 |
| INCBS | -.036 (.108) | 7.860 |

Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,

Source: Author's computation, 2022

The strength of income in determining FMBS is further shown in table 8.8. Income with a coefficient of -.159 remains the only significant variable among the predictors. The implication of

this is that it has a direct effect on FMBS. On the other hand, the interactive variable of the budget slack and income failed to produce a significant impact because the coefficient of the variable, which is $-.036$, is not statistically significant at 5%; hence budget slack does not have a moderating effect on the relationship between income and FMBS instead income has a substantial direct effect on FMBS. This is the same result obtained under the previous analysis. Similarly [y, all the values under the variance inflation factors VIF indicates that none of them is more significant than ten; therefore, the estimated model is free from the multicollinearity problem. A further test of the multicollinearity problem in the estimated model is shown in Table 8.9.

Table 8.9 Test for multicollinearity on the moderating role of budgets slack in FMBS and Income relationship

| Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-----------|------------|-----------------|----------------------|--------------|----------------|-------|
| | | | (Constant) | Budget Slack | Monthly Income | INCBS |
| 1 | 3.416 | 1.000 | .00 | .00 | .00 | .00 |
| 2 | .441 | 2.783 | .03 | .03 | .04 | .03 |
| 3 | .125 | 5.222 | .13 | .10 | .13 | .12 |
| 4 | .018 | 13.755 | .83 | .86 | .83 | .84 |

Source: Author's computation, 2022

The diagnostic result shown in table 8.9 further tested the presence of a multicollinearity problem in the estimated model. However, the variance proportion values are all less than 0.9, indicating that the multicollinearity problem is not severe enough to affect the estimated model results. Similarly, the eigenvalues are very low, showing further confirmation of no multicollinearity issue in the estimated model. Therefore it is valid to conclude from the analysis that budget slack adoption does not have a significant moderating effect on the relationship between income and FMBS.

8.3.5 Moderating effect of budget slack on the relationship between family size and FMBS

Another variable used as a determinant of FMBS is family size. The study also assesses the role of adoption budget slack on the relationship between family size and FMBS. The analysis is shown in Table 8.10

Table 8.10: Regression results in moderating the effect of budget slack on the relationship between family size and FMBS

| Variables | Coefficients | Collinearity Diagnostics VIF |
|--------------|-----------------|------------------------------|
| (Constant) | .200 (.221) | |
| Family size | -.132 (.126) | 2.589 |
| Budget Slack | -.302 (.287) | 7.544 |
| FZBS | .199 (.161) | 9.496 |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,*

Source: Author’s computation, 2022

Similarly, the budget slack interactive variable with family size coefficients is .199, which is not statistically significant at 5%. The result implies that budget slack does not play an essential role in the relationship between budget slack and family size. This shows that budget slack does not have a moderating effect on FMBS. Family size as a variable can directly affect FMBS without necessarily being moderated by budget slack. The collinearity test also shows that the variance inflation factors figures are all less than ten and indicates that multicollinearity is not enough to affect the estimated model negatively. A further test of multicollinearity is shown in Table 8.11

Table 8.11 Test for multicollinearity on the moderating role of budgets slack in FMBS and family size relationship

| Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-----------|------------|-----------------|----------------------|-------------|--------------|------|
| | | | (Constant) | Family Size | Budget Slack | FZBS |
| 1 | 3.449 | 1.000 | .00 | .00 | .00 | .00 |
| 2 | .417 | 2.878 | .03 | .03 | .03 | .03 |
| 3 | .119 | 5.380 | .11 | .11 | .11 | .10 |

| | | | | | | |
|---|------|--------|-----|-----|-----|-----|
| 4 | .015 | 15.148 | .85 | .86 | .85 | .87 |
|---|------|--------|-----|-----|-----|-----|

Source: Author's computation, 2022

Results in table 8.11 further confirmed that the issue of multicollinearity is not enough to influence the results of the estimated model for the relationship between family size and FMBS, with budget slack as the moderating factor. Firstly all the variance proportions figures are not greater than 0.9. Secondly, the eigenvalues are very low. All of these show little influence of multicollinearity, which attests to the fact that the results on the moderating effects of budget slack on the relationship between FMBS and family size, as shown in table 8.11, are valid. And we can conclude that budget slack does not affect the relationship between the two.

8.3.6 Moderating effect of budget slack on the relationship between Qualifications and FMBS

Qualifications remain one of the factors used as the determinants of FMBS. Therefore, the role of budget slack in the relationship between FMBS and qualification is also investigated. The regression result is presented in Table 8.12.

Table 8.12: Regression results in moderating the effect of budget slack on the relationship between qualification and FMBS

| Variables | Coefficients | Collinearity Diagnostics VIF |
|-----------------------|-----------------|------------------------------|
| (Constant) | .353 (.210) | |
| Highest Qualification | -.256 (.134) | 3.069 |
| Budget Slack | -.343 (.262) | 6.314 |
| QLFBS | .257 (.164) | 8.779 |

Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,

Source: Author's computation, 2022

It is obvious from the table that the interactive variables of highest qualification and budget slack do not have a significant impact on FMBS. The coefficient is .257 and is not significant at a 5% significant level thus indicating that budget slack as a moderating variable between qualification and FMBS is unimportant. In other words, budget slack adoption does not affect the impact of capabilities on FMBS. Furthermore, the variance inflation factors values are all less than 10, showing that the multicollinearity problem is not an issue in the estimated model. The test of multicollinearity in Table 8.13 corroborates this.

Table 8.13 Test for multicollinearity on the moderating role of budgets slack in FMBS and qualification relationship

| Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-----------|------------|-----------------|----------------------|--------------|-----------------------|-------|
| | | | (Constant) | Budget Slack | Highest Qualification | QLFBS |
| 1 | 1.996 | 1.000 | .00 | .03 | .03 | .03 |
| 2 | 1.000 | 1.413 | .00 | .00 | .00 | .00 |
| 3 | .944 | 1.454 | .00 | .05 | .24 | .00 |
| 4 | .060 | 5.756 | .00 | .82 | .73 | .87 |

Source: Author's computation, 2022

Similarly, the results in table 8.13 are not in any way different from the previous ones, as it shows that all the variance proportion values are less than 0.9. This effect is that budget slack does not have an essential role in the relationship between FMBS and qualifications. Again, the results in the table show that multicollinearity does not affect this conclusion.

8.3.7 DISCUSSIONS OF RESULTS ON THE MODERATING EFFECT OF BUDGET SLACK ADOPTION ON FMBS

The first aspect of the result shows that many administrators are aware of budget slack usage as a tool to mediate or moderate their financial management behaviour. The majority of administrators use the tool in their day-to-day activities that involve finance. Although in the empirical literature like that of Rose and Smith(2012), the level of awareness of budget slack usage is limited to its application to budget preparation in organisations, and managers usually use them to the moderate

level of expenditures and revenue by deliberately reducing the expected income of increasing the anticipated expenditure so that they can be forced to work within the limit of resources available. Putra, Albab, and Swara (2019) noted that applying budget slack to individual financial activities is not common, notwithstanding that few studies identify some households using it in domestic household budget preparation. This view has been confirmed in the study, which has shown that sizeable numbers of sampled administrators are aware of budget slack usage and have also been applying it.

The second aspect of the analysis focused on the moderating effect of budget slack on the FMBS of the administrators in the sampled SOEs. In the previous objectives, the effect of some factors on FMBS was investigated. These factors are called the determinants of FMBS, and the results show that financial knowledge, financial literacy, income, and family size all significantly impact the FMBS of the administrators. However, this aspect seeks to determine if these results would have been different if the SOEs administrators had adopted budget slack. In the same vein, variables such as locus of control and qualifications failed to affect FMBS significantly. Therefore, this study investigated if the result would have been different had it been for the administrators who adopted budget slack to moderate their FMBS. The main tasks are attended to under this objective, and the results have been presented. The discussion of the results is now being done under this section.

Firstly, results from the analysis show that budget slack has a significant moderating effect on the relationship between financial knowledge and FMBS. This implies that budget slack affects the strength and the direction of the effect of financial knowledge on the FMBS. Under the determinants of FMBS, it was found that financial knowledge fails to influence positively responsible financial management behaviour; however, this result has shown that it would have been different if the administrators had adopted budget slack. It indicates that if the administrators had cut their projected revenue or increased their expected expenditure to maintain a constrained FMBS, their knowledge of financial-related disciplines would have significantly affected their financial management behaviour. It follows that those administrators who practice budget slack assisted their level of financial knowledge to make them achieve a more responsible financial management behaviour. Although previous empirical studies' application of budget slack to individual financial management behaviour is very scarce, what is rampant in the literature is the application of budget slack by the managers saddled with the responsibilities of budget

preparation. Among these authors, Putra, Albab, and Swara (2019) established a strong link between the financial knowledge of the managers and their ability to apply budget slack. This situation appears to be playing out regarding the findings on the moderating role of budget slack in financial knowledge and the FMBS relationship. This study has shown that the adoption of budget slack has a significant impact on the influence of financial expertise on the FMBS of the administrators.

Secondly, the financial literacy effect on FMBS was not influenced by the adoption of budget slack. It would be recalled that financial literacy is one of the variables with a significant positive impact on FMBS. It was established that improvement in the financial literacy of administrators could contribute to responsible financial management behaviour. This study has further found that adopting budget slack has no role, unlike financial knowledge. While financial knowledge refers to an in-depth understanding of financial-related disciplines, financial literacy refers to an idea of these disciplines. This study has established that once an administrator has an idea of finance-related disciplines, he does not need to adopt budget slack before he can control his financial management behaviour. By implication adoption of a budget, slack does not improve or decrease the impact of financial literacy on FMBS. It was stated earlier that the adoption of budget slack strongly correlates with financial knowledge. The implication is that the study of Olanrewaju (2016) posited that adopting budget slack in-depth knowledge of the financial-related discipline is essential, which is why budget managers in various organisations use it. Financial literacy does not have this strong ties with budget slack adoption; hence the moderating role of budget slack on its influence on FMBS is insignificant. Once an administrator is financially literate, this can promote responsible financial management behaviour without adopting budget slack.

Similarly, budget slack adoption does not moderate the relationship between locus of control and FMBS. It would also be recalled that locus of control does not significantly impact FMBS; therefore, with the findings of this study, adopting budget slack is not going to change that. The relationship between locus of control and FMBS was shown to be weak in the previous objective, and this analysis that tries to investigate the moderating role of the adoption of budget slack has vividly revealed that locus of control still does not play an important role in FMBS of the administrators even if they adopt budget slack. It would be recalled that one of the meanings of locus of control is the ability of an individual control whatever happens to him. The study has shown that this ability does not influence the financial management behaviour of the administrators, and

whether they adopt budget slack or not, this will still not affect the FMBS of the administrators of the SOEs.

Income remains one of the most critical factors influencing FMBS without adopting budget slack. Findings from the study show that budget slack does not play any significant role in the relationship between income and FMBS. It was also confirmed that income has a direct effect on FMBS. The result has joined other studies, such as Putra, Albab, and Swara (2019), which concluded their study that household income is an essential factor that can determine financial management behaviour. A deliberate cut in the projected revenue or increase in an individual's projected expenditure to maintain a certain level of financial management behaviour does not affect the role income play in FMBS. Findings also show that rich administrators are more financially irresponsible than less-rich administrators.

It should be noted that these were the same findings obtained under the determinants of FMBS. The result implies that adopting budget slack by these administrators will not change the effect of income on the FMBS. It follows that once an administrator's income is high, there is more tendency for him to be financially irresponsible regardless of the adoption of budget slack. Once an administrator's income is low, there is less tendency for him to be financially irresponsible with the adoption of budget slack is inconsequential in this scenario. Income distribution remains an essential factor that can affect the financial management behaviour of an administrator in SOEs. The study of Kramer and Hartmann (2014) has identified the greed of leadership as the main factor causing financial fraud in the public sector in Nigeria. This study's findings appear to support this in that top administrators are not poor, and the salaries they are getting take care of their domestic needs. However, despite the level of income, which is relatively higher than other staff, they still have irresponsible financial management behaviour which might be responsible for the extent of fraud that has been happening in the Nigerian public sector generally.

Family size is the other variable confirming that the moderating role of budget slack adoption is insignificant in FMBS. The study demonstrated that the strength and the direction of influence of family size on FMBS are not affected by the adoption of budget slack. It was revealed from the study earlier that family size is an important factor that can affect FMBS and that administrators with larger family sizes are more financially irresponsible than those with smaller family sizes. Whether the individual adopts budget slack or not, the situation will not change. The findings have

further shown that the adoption of budget slack might not have any significant moderating effect on FMBS among the administrators. It is undeniable from the results of this study that family size affects FMBS directly, just as the conclusion of Kahar and Mahdi (2018) notwithstanding, the sample used in their study is different from what was used in this study, yet, the result also shows that family size is very important in determining the FMBS of an individual.

The qualification effect on FMBS is not affected by the adoption of budget slack. From the previous analysis, it was discovered that the qualifications of the administrators do not play a significant role in their FMBS; however, further analysis of the role of the adoption of budget slack has shown that it does not have a moderating effect on the relationship between qualification and FMBS. Several studies in the past have also established relationships between qualification and FMBS (Prihartono and Asandimitra 2018). However, this study investigates the role of adopting budget slack, and it has been revealed that it does not make qualifications to have a significant effect on FMBS.

In conclusion, out of the six factors identified as determinants of FMBS, namely financial knowledge, financial literacy, locus of control, income, family size, and qualification, budget slack adoption only affects the impacts of financial expertise on FMBS. In a more straightforward form, the moderating role of budget slack is only significant in the relationship between financial knowledge and FMBS. On the contrary, budget slack adoption does not play any role in the relationship between FMBS and the remaining five determinants.

8.4 EXAMINING SOME FACTORS THAT CAN INFLUENCE THE ADOPTION OF BUDGET SLACKS AMONG THE ADMINISTRATORS OF SOES IN NIGERIA

The second aspect of the chapter addresses the fourth objective of the study, which is the assessment of the factors that determine the usage of or application of budget slack by the administrators in the SOEs. Again, the binary response is used for the dependent variable, which is the usage or adoption of budget slacks or not.

8.4.1 Logistic regression of factors that affects budget slack usage among the administrators

The dependent variable in the estimated regression model is budget slack, and the results on its determinants are presented in Tables 8.14 and 8.15

Table 8.14: Logistic regression (odds ratios) results in determinants of Budget slack usage

| Variable | Odd ratios “b” /Standard Error “SE” |
|--------------------------|--|
| Intercept | .3664541 (.286831) |
| Self-control SC | 0.9403519 (.1529557) |
| Optimism OPT | 1.751606** (.2935059) |
| Family Size FZ | .8755997 (.0871537) |
| Deliberative Thinking DT | 1.092055 (.1021374) |
| Financial Literacy FL | .9413852 (.1022687) |
| Pseudo R Square | 0.2077 |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,*

Source: Author’s computation, 2022

Table 8.15: Logistic regression (coefficient) results in determinants of Budget slack usage

| Variable | Coefficient “b” /Standard Error “SE” |
|-----------------|---|
| Intercept | .3664541 (.286831) |
| Self-control SC | -.0615011 (.162658) |
| Optimism OPT | .5605328** (.1675639) |
| Family Size FZ | -.1328462 (.099536) |

| Variable | Coefficient “b” /Standard Error “SE” |
|--------------------------|---|
| Deliberative Thinking DT | .0880613 (.0935277) |
| Financial Literacy FL | -.0604029 (.1086364) |
| Pseudo R Square | 0.2077 |

*Note: (***) Statistical Significance at 1%, (**) Statistical Significance at 5%, (*) Statistical Significance at 10%,*

Source: Author’s computation, 2022.

Both tables 8.14 and 8.15 show the logistic regression results for odd ratios and coefficients, respectively. The results indicate that out of all the identified factors that can determine the usage of budget slack, only optimism has the expected significant impact on budget slack usage in both the odd ratio and coefficient results.

For instance, the odds ratio for optimism is 1.751606, which is statistically significant at 5%. Firstly, the odds ratio is greater than one, implying that usage of budget slack is more likely to happen as optimism rises among the SOE administrators. The meaning is that the more the administrators are optimistic about uncertainties regarding their finances in the future, they will likely increase the usage of budget slack. Similarly, table 8.15 also follows the same line of the result as the optimism coefficient remains the only variable with a significant P value. The coefficient from the table is .5605328 and is significant at 5%. The implication is that a unit rise in optimism will lead to about a .5605328 rise in the usage of budget slack by the administrators. This result shows that the level of optimism exhibited by the administrators, especially about uncertainties in their future finances, remains the primary driver of budget slack usage.

Another variable with an odds ratio greater than one is deliberative thinking but it fails to have a significant impact. Notwithstanding the value of the odds ratio is 1.092055. This is above one, the Odd ratio > 1; hence it implies that the more deliberative thinking the administrators have, the more they increase the usage of budget slack. In other words, the administrators take precautions and control their thoughts deeply before they make decisions on budget slack usage and the more they do this, the more they use it in their financial decisions. The coefficient of deliberative thinking in table 5.29 is .0880613, but it is not statistically significant. This shows that although the odds ratio

is greater than one, it is still not enough to influence budget slack alone, significantly unlike optimism.

However, other variables, such as self-control. Family size and financial literacy play little or no role in the decision to make use of budget slack by the administrators. It is evident from the analysis that the bulk of the findings to use budget slack rests on their optimism about future uncertainties and partly due to deep thought about their finances, called deliberative thinking.

The R square is low at 22%, which is an indication that most factors do not significantly impact the dependent variable, which is budget slack. Yet the bulk of the explanatory power of the model indicated by the 22% rests on optimism about the future uncertainties in finance of the administrators.

8.4.2 Post-estimation test for the logistic regression

The model is tested for efficacy by assessing the estimated logistic regression for model fitness and classification tests, which will show the estimated model's sensitivity and specificity predictability powers.

Table 8.16 Goodness of Fit test

| | |
|-----------------|---------|
| Pseudo R square | 0.22777 |
| Prob > chi2 | 0.0137 |

Source: Author's computation, 2022.

The estimated model has a deviance R square of 0.22777, indicating that the explanatory variables explain about 22% variation in budget slack. Although this is low, it might not be unconnected to the fact that only optimism among the four predictors significantly impacts budget slack usage among the administrators. Notwithstanding, the overall fitness of the model is significant, going by the P-value of the Chi-Square, which is 0.013. This shows that the model fits the data very well and points to the fact that the estimated binary regression or logistic model is significant.

Table 8.17 Logistic regression Classification

| | |
|----------------|------------|
| Classification | Percentage |
| Sensitivity | 87.55% |

| | |
|---------------------------|--------|
| Specificity | 19.08% |
| Positive predictive value | 62.39% |
| Negative predictive value | 50.00% |
| Correctly classified | 60.52% |

Source: Author’s computation, 2022

Important fundamental measures of diagnostic accuracy of a binary regression are sensitivity (i.e., true positive rate) and specificity (i.e., true negative rate). The accuracy of such binary-valued diagnostic tests is assessed regarding the probability that the test correctly classifies an appropriate subject as unfavourable, namely the specificity (also known as the true negative rate), and the likelihood that the test correctly classifies another relevant subject as positive, namely the sensitivity (also known as the true positive rate). From the estimated logistic regression result, the specificity and sensitivity predictive values are 50.00% and 62.39%, respectively. The implication is that the estimated model has reliable predictive power, and the result can be relied upon. In addition, generally, 60.52% correct classification is achieved, which is very impressive and supports the fact that the predictive power of the estimated logistic regression is good.

8.4.3 Discussion of results on determinants of budget slack usage

Results from the analysis show that determinants of budget slack usage among the administrators of the SOEs indicate that varieties of factors might be responsible for its use. Notwithstanding, the effect of these identified factors on budget slack usage varies.

Considering the study's five determinants of budget slack identified in the study namely; self-control, optimism, family size, deliberative thinking and financial literacy, findings show that only optimism has the strongest and most significant influence on the usage of budget slack among the administrators. Many of the administrators believed that the level of optimism they have about their future finance encourages them to take some decisions that may affect future finance, and this decision included budget slack usage. It was revealed in the study that apart from the fact they are all optimistic about uncertainties in the future, they are usually afraid of uncertainties regarding their finances and try to take cognizance of them by adopting budget slack. In the study of White, Watkins, McCoy, and Muruthi (2021), optimism was also identified as a significant factor

influencing decision-making about individual finance. Although the study did not identify budget slack usage as the financial decision, it underscores the importance of optimism and respect for future uncertainties in finance as a significant driver of many financial decisions made by many individuals in their daily activities. This study only tested the effect of optimism on budget slack adoption, which is a major critical financial decision that an individual can make, and the effect is positive and significant. This shows that the more an individual is optimistic about future occurrences of uncertainties in their finance, the more they will be encouraged to adopt budget slack.

On the contrary, other factors, such as self-control, play little or no role in their usage of budget slack. However, the administrators in this study are not using budget slack because they have self-control. In addition, the study further shows that the adoption of budget slack is not in any way dependent on the size of the family. Although studies such as RafindadiandOgidan, (2018) have confirmed that family size is very vital to some decisions that bother finance, this study seems not to support the fact that budget slack usage is among those financial decisions that can be significantly affected by the size of the family of an individual. However, many of the studies where financial decisions are influenced by family size used another class of individuals and not SOEs administrators, which is the focus of this study. This might affect the results regarding the important determinants of key financial decisions like budget slack adoption.

Deliberative thinking was shown in the study to have some relative effect on budget slack usage, but the effect is not as vital as optimism. The implication is that decisions on budget slack are not intuitively taken instead, it requires deep thought from any individual that wants to adopt the method to meditate on their financial behaviour. Many studies that used deliberate thinking discovered that it has a significant role in key financial decisions. It follows that financial decision like budget slack adoption is not hurriedly taken but it deeper consideration from the adopter. The results from the study show that both deliberative thinking and optimism are the only variables with an odds ratio greater than one; hence it implies that the more an administrator engages in any one of the two, the more the chance of using budget slack.

It was also gathered from the analysis that administrators' financial literacy level has no role to play in adopting budget slack. This is because budget slack remains a popular act that is being taken by many individuals in their daily financial activities, and hence no formal or informal

education is needed to adopt or understand how it is used. Therefore, it would be clearly understood in this study that the administrators included in the survey are educated and literate. However, this research has shown that this particular does not have any role in their decision to adopt budget slack either to mediate in or moderate their financial management behaviour.

Although many studies have also identified financial literacy as a key to some financial decisions made by an individual, from the result, it is clear that the adoption of budget slack is not one of those financial decisions influenced by financial literacy.

8.5 CONCLUSION

Chapter eight focused on the presentation, analysis, and discussion of the results of objectives three and four of the study. The two objectives relate to budget slack adoption. The first aspect focused on analysing the results of moderating the effect of budget slack adoption on financial management behaviour. Budget slack was used as moderating variable, while the identified determinants of financial management behaviour in the previous chapter were used as the independent variables. The result showed that budget slack largely does not have a significant moderating effect on financial management behaviour except in a few areas. The second aspect of the chapter dealt with factors that influence the adoption of budget slack among administrators. The results were presented, analysed and discussed.

The next chapter, chapter nine, examines the impact of financial management behaviour on the performance of the SOEs in Nigeria.

CHAPTER NINE

**INVESTIGATING THE EFFECT OF FINANCIAL MANAGEMENT
BEHAVIOUR ON THE PERFORMANCE OF THE SOES.**

9.1 INTRODUCTION

The fifth objective of this study is to investigate the effect of the financial management behaviour of the administrator on the performance of the SOEs. The analysis here leverages the result from some previous chapters, especially chapter five, where the FMBS was developed. The FMBS is used as a proxy for the financial management behaviour of the administrators under this chapter and is the main independent variable.

9.2 NORMALITY TEST

This test is crucial to the regression analysis adopted for analysing the relationship between FMBS, other shift variables, and organisational performance.

Table 9.1: Test for Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|----------------------------|---------------------------------|-----|------|--------------|-----|------|
| | Statistic | Df | Sig. | Statistic | Df | Sig. |
| Total asset | .238 | 385 | .000 | .889 | 385 | .000 |
| Employees | .168 | 385 | .000 | .889 | 385 | .000 |
| Government allocation | .243 | 385 | .000 | .879 | 385 | .000 |
| Government policy | .186 | 385 | .000 | .899 | 385 | .000 |
| FMBS | .161 | 385 | .000 | .887 | 385 | .000 |
| Organisational Performance | .142 | 385 | .000 | .963 | 385 | .000 |

Source: Author's computation, 2022

Table 9.1 shows that both Kolmorov-Smirnov and Shapiro-Wilk statistics for all the variables are statistically significant. However, it should be noted that the data set is more than 100; hence the

study will stick with the result from Kolmorov-Smirnov. This indicates that they are not normally distributed; therefore, applying linear regression or the Pearson correlation technique to estimate the relationship between FMBS and organisation Performance will be inappropriate. Consequently, ordinal regression and spearsman rank correlation approaches are more advisable, which are applied in this study.

9.3 CORRELATION ANALYSIS

As earlier deduced from the pre-estimation test, the Spearman rank correlation is applied in this study. The result is presented in Table 9.2.

Table 9.2: Spearman Rank Correlation analysis

| | Total Asset | Employees | FMBS | Government allocation | Government policy | Organisational performance |
|--|--------------------|------------------|-------------|------------------------------|--------------------------|-----------------------------------|
| Total Asset | 1.000 | -.033 | .006 | .059 | .089 | .599** |
| Employees | -.033 | 1.000 | .060 | .030 | .105* | .569** |
| FMBS | .006 | .060 | 1.000 | .070 | .179** | .021 |
| Government allocation | .059 | .030 | .070 | 1.000 | .051 | .086 |
| Government policy | .089 | .105* | .179** | .051 | 1.000 | .131* |
| Organisational performance | .599** | .569** | .021 | .086 | .131* | 1.000 |
| **. Correlation is significant at the 0.01 level (2-tailed). | | | | | | |
| *. Correlation is significant at the 0.05 level (2-tailed). | | | | | | |

Source: Author's computation, 2022

The results of correlation analysis, as shown in the table above, indicate that some variables have a strong and significant relationship. For instance, total assets share a significant relationship with organisational performance. The coefficient is 0.599, and it is significant at 5%. Another significant relationship on the table is between employee and organisational performance. The

correlation coefficient is 0.569 and is also statistically significant at 5%. The result implies a strong and positive association between the performance of the SOEs and the number of employees. There is also a solid relationship between the total asset of the SOEs and their performances.

Furthermore, government policy also significantly correlates with both FMBS and the number of employees. The correlation coefficients are 0.105 and 0.179, respectively; both are significant at 1% and 5%, thus confirming that the government policy is strongly linked with FMBS and Employees. The last but not the least significant correlation in the table is between organisational performance and government policy. The coefficient is 0.131, and it is significant at 1%. The implication is that there is a strong relationship between government policy and the performance of the SOEs.

9.4 ORDINAL REGRESSION ANALYSIS FOR THE PERFORMANCE OF THE SOES

The pre-estimation test has shown that the non-linear approach of estimation is more suitable for this analysis, hence the ordinal regression selection ahead of linear regression to show and explain the impact of FMBS on the performance of the SOEs in Nigeria. Furthermore, this aspect explains each step of the analysis taken to arrive at the estimated model showing the relationship between SOEs performance, FMBS, and some other shift factors of SOEs performance in Nigeria. The step starts with the model-fitting information.

Table 9.3: Model Fitting Information

| Model | -2 Log-Likelihood | Chi-Square | Df | Sig. |
|-----------------------|-------------------|------------|----|------|
| Intercept Only | 1540.769 | | | |
| Final | 937.464 | 603.305 | 26 | .000 |
| Link function: Logit. | | | | |

Source: Author's computation, 2022

Table 9.3 explains well the data collected from the survey fit the data. This condition is germane to getting a good result from the ordinal regression. Consequently, the results from the analysis show that the chi-square value of 603.305 is significant; hence the null hypothesis that the data does not fit the model is rejected at a 1% significant level. Then, it is concluded that the data used in the analysis is suitable for the model estimated. The next is the goodness of fit.

Table 9.4: Goodness of Fit

| | Chi-Square | df | Sig. |
|-----------------------|------------|------|-------|
| Pearson | 1026.687 | 1684 | .068 |
| Deviance | 928.926 | 1684 | 0.956 |
| Link function: Logit. | | | |

Source: Author's computation, 2022

The overall fitness of the estimated model is described in the model. The Pearson and the Deviance chi-squares of 1026.687 and 928.926 are not statistically significant at 5%. Therefore, the null hypothesis is that the goodness of fit of the estimated model is okay, and the independent variables describe the dependent variables very well. Since the chi-square values are insignificant, it is concluded that the estimated model passes the overall fitness test, and its parameter estimates are suitable for inferences. The extent to which the variables explain the dependent variable is shown in the next table pseudo R square.

Table 9.5. Pseudo R-Square

| | |
|-----------------------|------|
| Cox and Snell | .791 |
| Nagelkerke | .805 |
| McFadden | .387 |
| Link function: Logit. | |

Source: Author's computation, 2022

The pseudo R square gives the percentage of the dependent variable SOEs performance that is explained by the combination of the FMBs and other shift factors such as the total asset of the SOEs, the employee number, government policy, and government allocation. The Nagelkerke value is explained in this table and is 0.805. The result implies that FMBS and other variables explain about 81% of systematic variation in the SOEs' performance. This attests to why the model passes the overall test of significance under the goodness of fit. The result confirmed that all the five variables used as predictors in the model are very crucial to the SOEs' performance in Nigeria. Next is the ordinal regression results.

Table 9.6: ordinal regression estimates

| | | Estimate | Std. Error | Wald | df | Sig. |
|---------------|------------------------|----------------|------------|---------|----|------|
| Thresh old | [PERFORMANCE = 1.33] | -17.020 | 1.066 | 254.772 | 1 | .000 |
| | [PERFORMANCE = 2.00] | -14.753 | .837 | 310.909 | 1 | .000 |
| | [PERFORMANCE = 2.33] | -13.598 | .780 | 304.229 | 1 | .000 |
| | [PERFORMANCE = 2.67] | -11.929 | .698 | 291.811 | 1 | .000 |
| | [PERFORMANCE = 3.00] | -9.341 | .596 | 245.291 | 1 | .000 |
| | [PERFORMANCE = 3.33] | -7.457 | .527 | 200.079 | 1 | .000 |
| | [PERFORMANCE = 3.67] | -5.364 | .466 | 132.280 | 1 | .000 |
| | [PERFORMANCE = 4.00] | -2.835 | .414 | 46.995 | 1 | .000 |
| | [PERFORMANCE = 4.33] | -.528 | .404 | 1.707 | 1 | .191 |
| | [PERFORMANCE = 4.67] | 1.349 | .559 | 5.828 | 1 | .016 |
| Locati on | [TOTAL ASSET=1.00] | -8.406 | .641 | 171.945 | 1 | .000 |
| | [TOTAL ASSET=2.00] | 6.741 | .458 | 216.684 | 1 | .000 |
| | [TOTAL ASSET=3.00] | 4.564 | .399 | 130.550 | 1 | .000 |
| | [TOTAL ASSET=4.00] | 1.817 | .321 | 31.995 | 1 | .000 |
| | [TOTAL ASSET=5.00] | 0 ^a | . | . | 0 | . |
| | [EMPLOYEE=1.00] | 9.983 | .725 | 189.727 | 1 | .000 |
| | [EMPLOYEE=2.00] | 6.595 | .454 | 211.224 | 1 | .000 |
| | [EMPLOYEE=3.00] | 3.352 | .314 | 113.835 | 1 | .000 |
| | [EMPLOYEE=4.00] | -2.094 | .313 | 44.717 | 1 | .000 |
| | [EMPLOYEE=5.00] | 0 ^a | . | . | 0 | . |
| | [GOVT.POLICY=1.00] | .332 | .387 | .737 | 1 | .391 |
| | [GOVT.POLICY=2.00] | -.666 | .339 | 3.866 | 1 | .049 |
| | [GOVT.POLICY=3.00] | 1.044 | .293 | 12.721 | 1 | .000 |
| | [GOVT.POLICY=4.00] | .674 | .295 | 5.232 | 1 | .022 |
| | [GOVT.POLICY=5.00] | 0 ^a | . | . | 0 | . |
| | [GOVT.ALLOCATION=1.00] | -.132 | .875 | .023 | 1 | .880 |
| | [GOVT.ALLOCATION=2.00] | -.372 | .339 | 1.201 | 1 | .273 |
| | [GOVT.ALLOCATION=3.00] | -.084 | .295 | .081 | 1 | .776 |

| | | Estimate | Std. Error | Wald | df | Sig. |
|---|-----------------------------|----------------|------------|-------|----|------|
| | [GOVT.ALLOCATION=4.00] | -.556 | .260 | 4.568 | 1 | .033 |
| | [GOVT.ALLOCATION=5.00] | 0 ^a | . | . | 0 | . |
| | [V.IRRESPONSIBLE FMBSI=.00] | -.611 | .330 | 3.430 | 1 | .064 |
| | [IRRESPONSIBLE FMBSI=1.00] | -.408 | .214 | 3.641 | 1 | .046 |
| | [RESPONSIBLE FMBSI=2.00] | 0 ^a | . | . | 0 | . |
| Link function: Logit. | | | | | | |
| a. This parameter is set to zero because it is redundant. | | | | | | |

Source: Author's computation, 2022

The estimated model for the SOEs performance is shown in the table above, which is table 8.6. The FMBS, a scale variable, is converted to an interval scale to know the location of the significance or insignificance of the variable. Consequently, the four identified four categories of financial behaviour responsibilities are used here. These include very irresponsible, coded 0; irresponsible, coded 1; responsible, coded 2. and very responsible, coded 3. The results show the effect of FMBS on the SOEs' performance at different levels of financial management behaviour responsibilities.

It is obvious from the table that both very irresponsible and irresponsible financial management behaviours have an inverse relationship with SOE's Performance. This is because the parameter estimates of -.611 and -.408 for both very irresponsible and irresponsible financial management behaviour are negative. While very irresponsible is significant at 10%, irresponsible is significant at 5%. The result implies that the more an administrator behaves irresponsibly regarding financial management, the less the performance of the SOEs. The responsible financial management behaviour, also included in the estimated model, is treated as a redundant variable because it has no significant impact on the performance of the SOEs. The result has further underscored the importance of good and responsible financial management behaviour among the administrator in the performance of the SOEs.

However, other variables used in the estimated model that significantly impact the Performance of the SOEs are total assets, number of employees, and government policy. For instance, the

coefficients of all the locations captured under total assets are all statistically significant at 1%. This is an indication that the asset of the SOEs is very germane to their performances. In the same vein number of employees is used to proxy labour in the SOEs. The result is very straightforward as well. All the coefficients of the employees for different locations are significant at 1%. The implication is that labour is very germane to the performance of the SOEs. Still, on the variables with significant impacts on Performance, government policy was shown in the table to exert a significant impact on the performance of the SOEs. The results show that all the locations except one have a significant impact on SOEs' Performance. The result further attests to the fact that these SOEs are much affected by government policy.

The only variable with a less significant effect or impact on the performance of the SOEs is government allocation. It is apparent that since they are government-owned enterprises, they are entitled to some allocation from the government in any fiscal year. Therefore, the table's result shows that the SOEs' allocations are not significant enough to influence their performances positively.

Next is to test the estimated model for parallel lines further to investigate the model's suitability for the study and to verify further the extent to which the result from the estimated model can be relied upon to draw inferences and forecasting.

Table 9.7. tests of parallel lines

| Model | -2 Log-Likelihood | Chi-Square | Df | Sig. |
|--------------------------|----------------------|---------------------|-----|-------|
| Null Hypothesis | 937.464 | | | |
| General | 841.343 ^a | 96.121 ^b | 234 | 1.000 |
| c. Link function: Logit. | | | | |

Source: Author's computation, 2022

The efficiency of the parameter estimates is determined by the test of parallel lines and the null hypothesis that the location parameters (slope coefficients) are the same across response categories. Therefore, this should be accepted to have a good and acceptable estimated model. From the table, the chi-square value is 96.12, which is not significant at 5%, thus showing that the

null hypothesis is accepted; hence we agreed that the location parameters (slope coefficients) are the same across response categories. This result makes the estimated model relevant in achieving the study's objective and improves confidence in the parameter estimates of the variables used as predictors in the estimated model.

9.5 DISCUSSION OF RESULTS ON THE IMPACT OF FINANCIAL MANAGEMENT BEHAVIOUR OF ADMINISTRATORS ON THE PERFORMANCE OF THE SOES

Results from the analysis of the results on the impact of FMBS on the performance of the SOEs have shown some important findings that are worthy of discussion. The two significant results of the relationship between the two are both the correlation and the regression result.

The main interest of the study is to investigate the relationship between FMBS and the performance of the SOEs in Nigeria. Under the correlation analysis, there seems to be no significant relationship between the two, but the relationship becomes clearer when the ordinal regression analysis is done. This is because the FMBS is now converted to an interval scale that can categorize levels of financial management behaviour as very irresponsible, irresponsible, responsible, and very responsible financial management behaviour. All these are used as separate locations as the result of the impact of financial management behaviour on SOEs performance

The summary of the impact of FMBS on SOE performance is that both very irresponsible and irresponsible financial management behaviour has a significant negative impact on the performance of the SOEs in Nigeria. The result indicates that irresponsible financial management behaviour on the part of the administrators working at the federal SOEs in Nigeria is inimical to the success of the SOEs. The reckless financial management behaviour of the top administrators of these SOEs has pushed many of them to commit grievous financial frauds that have brought many SOEs to their knees over the years (Adebayo and Ilesanmi, 2020).

The result is in line with various findings from both empirical studies and desk research studies on the subject matter in Nigeria. Over the years, studies have pointed out that the activities of the top administrators in the Nigerian public sector have been a significant challenge to the performance of many SOEs in the country (Inakefe, Bassey, and Innah, 2021). TI (2019) ranked the Nigerian public sector as one of the most inefficient sectors in Nigeria owing to the extent of financial fraud going on in the sector. Incidents of money laundering, embezzlement, bribery, nepotism, and other forms of corruption and already endemic in the public sector where the SOEs

belong in Nigeria. Anyanwu (2019), in his conclusion of the survey on the Nigeria government parastatals in 2019, concluded that the barrage of poor service delivery, inefficiency and gross financial misconduct bulk of which stops at the tables of top administrators, are major attributes of the parastatals, and this has been affecting their contributions to the economic growth of Nigeria.

Fatile (2013) cited Nigerian National Petroleum Company NNPC, the defunct Power Holding of Nigeria PHCN, and Nigeria liquified Natural Gas NLNG among others, are examples of federal government parastatals with poor service deliveries owing to misconduct, mostly financial activities in these SOEs. Several billions of dollars have been budgeted for the renovation and revamping of the four refineries of Nigeria by the NNPC within the last two decades, yet, Nigeria remains the largest importer of refined crude oil in Africa. However, the country is the largest producer of crude oil in Africa (Egbunike and Okerekeoti, 2018). This has affected the performance and the contribution of the NNPC to Nigeria's economic growth. Among vivid scenarios that make it very evident that financial mismanagement remains a significant challenge for the performance of the SOEs is the activities that culminated in the unbundling of the former PHCN. Before the unbundling of the PHCN in 2013, the nation barely generated up to 2000 MGW of electricity for a population of about 200 million despite billions of naira allocated to the power sector every year. After the military, the power sector has continued to enjoy the lion's share of Nigeria's budget but with little or nothing to show for it. To this moment, the commission of the economic and financial crimes EFCC is still on the trail of many administrators in the defunct PHCN to recoup some of the embezzled funds of the company (Eniola and Entebang, 2015). In the same vein, some of the top administrators in top SOEs like the Joint Admissions and Matriculation Board JAMB, and the National Examination Council NECO in Nigeria are also trailed by the EFCC due to financial fraud, which is traceable to their irresponsible financial management behaviour.

Findings from the impact of the FMBS on the performance of the SOEs also indicate that responsible financial management behaviour failed to affect the SOEs' performance significantly. This might not be unconnected to the fact that those administrators with responsible financial management behaviour are not enough to create any significant positive effect on the SOE's performance. More importantly, the study by Enofe, Afiangbe, and Agha (2017) concluded that prudent administrators who also have responsible financial management behaviour are not given respect, and they can be eased out of the SOEs unceremoniously since their percentage is very

small compared to the administrators with irresponsible financial management behaviour that are involved in many of the fraudulent activities in the Nigeria public sector in general. Therefore, this study has shown that irresponsible financial management behaviour from the administrators of the SOEs at the federal level in Nigeria has been harming the performance of the SOEs

Another interesting analysis result is the relationship between government policy and SOE performance. Results from the analysis showed that government policy affects SOEs' performance significantly. However, the result is not important because many policies summersault over the years have remained the bane of the performance of many SOEs in Nigeria. For instance, according to Rafindadi and Ogidan (2018), Nigeria's decision and the federal government's policy to deregulate the country's economy have been having both positive and negative effects on the performance of many SOEs in Nigeria. In a bid to make the sector more competitive, some of the SOEs that could not cope with competition from their private and foreign counterparts have folded up. This is a vital example of SOEs like PHCN and the Nigeria Telecommunication Commission. NITEL. When the communication sector was deregulated in 2001, the NITEL could not compete and eventually folded up. In the same vein, the rate of interest and inflation in the Nigerian economy is exerting a significant effect on the performance of many SOEs (Famade, Omiyale, and Adebola, 2015). This result implies that it is impossible to separate the SOEs' performance from government policy.

Expectedly, both total assets regarded as capital and the number of employees considered as labour have the most significant impact on the performance of the SOEs. The study goes in line with many empirical and theoretical studies which have identified capital and labour as the major shift factors of output growth. Therefore the result and findings from this study conform to the theoretical postulation of the expected relationship between capital and output performance and between labour and output performance. Several studies, such as Feriyanto, El Aiyubbi, and Nurdany (2020) have also obtained similar results in their various studies, which cut across the globe.

Government allocation is the only variable used as a shift factor of SOE performance that failed to impact it significantly. Budgetary allocation to the SOEs has continued to dwindle over the years mainly due to the rise in the inflation rate, which makes the purchasing power of the fund released to the SOEs to be falling short of expectations (Eniola and Entebang, 2015). This study

has joined other studies like (Famade, Omiyale, and Adebola, 2015) to support the fact that the lack of significant impact of government allocation to the government parastatals constitutes a major setback to the performance of most SOEs. According to Inakefe, Bassey, and Innah (2021), although most SOEs are supposed to be profit-generating due to low government participation regarding the provision of adequate funding of these SOEs, many of them have failed to meet their target regarding performance. Complaints about meagre budgetary allocation to SOEs in Nigeria are as old as the country itself; however, the situation has become worsened due to the weak exchange rate, high inflation rate, and general macroeconomic instabilities (Feriyanto, El Aiyubbi and Nurdany, 2020). These, among many others have remained a major challenge to the SOEs in Nigeria. Therefore findings from this study are not in isolation regarding the results on the impact of government allocation on the performance of the SOEs.

An important and interesting result that was also obtained from the result is the relationship between financial management behaviour and government policy. The correlation analysis result particularly showed that government policies have a significant effect on FMBS. The implication is that policy on the inflation rate, interest rate, and other macroeconomic policies of the government among others affect the financial management behaviour of the administrators. The findings lend credence to the findings from the study of Egbunike and Okerekeoti (2018), who alluded that much irresponsible financial behaviour from many Nigerians, especially the top administrators as a result of the hard government policy that failed to uplift them from poverty. Many recent and past studies have identified the extent of poverty in Nigeria to the malfunctioning of many government policies which has thrown many households to develop irresponsible financial management behaviour that has also encouraged them to perpetuate many financial frauds noticed in the SOEs in Nigeria. The findings from the correlation analysis between government policy and financial management behaviour show that good government policy impact positively on FMBS, in other words, the better the government policy the more responsible financial management behaviour is shown by the administrators.

The result has provided a strong link and interesting relationship between the financial management behaviour of administrators in the SOEs and the performance of the SOEs owned by the federal government of Nigeria. Government policy, total assets, and the number of employees are other factors that affect the performance of SOEs significantly. However, government

allocation to the SOEs which is a proxy for government funding is the only factor without a significant impact on the performance of the SOEs.

9.6 CONCLUSIONS

Chapter nine has presented, analysed, and discussed the empirical results on the impact of financial management behaviour on the performance of the SOEs in Nigeria. The chapter used the FMBS developed in chapter six as a proxy for the financial management behaviour of the administrators. Ordinal regression analysis is applied and both normality tests and correlation analysis were done on the variables. The spearman rank correlation method is used for the correlation analysis. This is because of the result of the normality test that favours the application of spearman rank correlation ahead of product-moment correlation. In the same vein, ordinal is preferred ahead of linear regression. All the results of the relationship between financial management behaviour and the performance of the SOEs are explained and discussed in the chapter.

The next chapter focuses on the summary conclusion and policy recommendations from the study generally.

CHAPTER TEN

SUMMARY CONCLUSION AND RECOMMENDATIONS

10.1 SUMMARY

This study investigates the relationship between financial management behaviour, budget slack, and the performance of state-owned enterprises in Nigeria. The focus of the study was mainly on the SOEs that belong to the federal government of Nigeria. The perennial problem of underperformance, poor service delivery, corruption, and reduction in the contribution to the IGR of the federal government, among others, remain burning issues around the SOEs in Nigeria and generally the country's public sector. Reports from several agencies that report on corruption ranking globally, especially Transparency International, have indicted the public sector of Nigeria where the SOEs belong as the country's most corrupt sector. Most of the corruption cases are linked with financial mismanagement, leading to serious challenges for many SOEs in Nigeria. Furthermore, financial fraud or mismanagement has been directly linked with top administrators' financial management behaviour in these SOEs, many of whose cases are still trending under various anti-graft agencies both inside and outside the country. In the same vein, many studies have described the financial management behaviour of many administrators as the cause of the barrage of underperformance of the SOEs in Nigeria, but the extent to which this assertion is correct about the SOEs in Nigeria was a major task before this study.

In addition, this task might not be as easy as it sounds because the measurement of financial management behaviour remains a subject of debate over the years in the literature. Notwithstanding, different studies have made some efforts to come up with what can be termed the financial management behaviour scale FMBS for some individuals. This also formed another important task before the study as efforts were made to develop a financial management behaviour scale for the administrators of the SOEs at the federal level in Nigeria. The study leveraged the fact that previous work on the FMBS stated that domestication of the FMBS is very important as factors used in the computation of the scale might vary from region to region or country to country. Therefore there might not be a “one size fits all” in FMBS.

However, studies have also shown that the government of Nigeria has made several efforts to curtail the activities of fraudulent administrators, especially in the SOEs sector of the country. Some of these efforts have led to the establishment of anti-graft agencies such as the EFCC and

ICPC, among others. From another perspective, some individuals have also been found making efforts to make themselves responsible for financial management behaviour by practising budget slack in their finances to minimise their reckless financial spending and unnecessary financial commitments that can push them to commit financial frauds in their variety in society. However, some studies have also shunned that the adoption of budget slack may moderate the financial management behaviour of an individual since it deals directly with individual budgets. Budget slack is a deliberate attempt by an individual to underestimate proposed revenue or overestimate the proposed expenditure. Whichever way, the individual is forced to work with a more stringent budget domestically and, as a result, curtail an extravagant expenditure that can push the individual to seek alternatives to increase his income. To what extent the administrators use this approach to moderate their financial management behaviour and the extent of moderating influence it has on their financial management behaviour are yet to be ascertained, and these form parts of the important questions this study tried to answer.

From another perspective, it was discovered that several factors could determine financial management behaviour, and identifying these factors might assist in checkmating irresponsible financial management behaviour. Therefore, this study from the literature identified some important shift factors of financial management behaviour and their relative influence on the financial management behaviour of administrators in the federal SOEs in Nigeria was also investigated. Furthermore, due to the adoption of budget slack by some individuals to moderate their financial management behaviour, some studies also identified some factors that can determine an individual's usage of this budget slack. The determination of these factors allowed the study to explain why the adoption is rampant or not common among administrators of the SOEs in Nigeria.

Following the aforementioned, this study was conducted under five modular themes, namely; Develop a measure of financial management behaviour for SOE administrators in Nigeria; Examine some factors that have influenced the usage of budget slacks among the administrators of SOEs in Nigeria; Investigate the moderating effect of adoption of budget slack creation on financial management behaviour of the administrators; Assess some factors that determine financial management behaviour of administrators in the SOEs in Nigeria; Determine the effect of financial management behaviour on the performance of the SOEs. All these themes are the study's objectives, which it has analysed empirically.

Relevant literature was reviewed in the study. For instance, some conceptual issues around the relationship between financial management behaviour, budget slack, and the performance of the SOEs in Nigeria were given priority in chapter two of this research report. While in chapter three, theoretical and empirical literature related to the study were given attention. Particularly, theories like the Theory of Planned Behaviour (TPB) and Rostow's theory of economic development, among others, were reviewed in the study. Similarly, previous studies on the development of FMBs, the impact of financial management behaviour on performance and studies relating to budget slack were all reviewed in the study. After the empirical review, gaps identified in the literature were itemized and linked one after the other with each objective of the study.

The diverse nature of the objective led to embracing different approaches of the methodology established from the literature to achieve the purposes of the study. Firstly, the study population was identified as the total number of SOEs at the federal level in Nigeria. Secondly, both multistage and random sampling techniques were used to select a representative of the population included in the survey. As a result, 385 respondents, mainly top administrators of the SOEs, were included in the survey. A structured questionnaire was used to collect information from these respondents, after which a pilot study was conducted. Both validity and reliability tests performed on the research instruments show that the questions met the required validity and reliability criteria to warrant their deployment for the full-scale survey. Although some questions were subjected to reframing and reconstruction before they could meet this standard of validity and reliability required.

Regarding the method of data analysis. These were diverse because the objective was also diverse; many required different estimating techniques. For instance, developing FMBS used factors analysis and weighted regression methodology. Some studies have used this in the past to develop such a scale.

Notwithstanding, some modifications were made to the measurement scales to domesticate it within the Nigerian context, especially as it affects the administrator of the SOEs in Nigeria. In the same vein, determining factors that affect financial management behaviour also used weighted regression analysis, as some studies in the past have used it.

Furthermore, the study applied logistic regression to determine the usage of budget slack while moderating variable was created in the weighted least square regression to examine the moderating

effect of budget slack on the financial management behaviour of the administrators. Lastly, the effect of financial management behaviour on the performance of the SOEs was investigated using the ordinal regression analysis. This followed the rejection of the linear regression application after the pre-estimation test selected the non-linear regression approach. Hence, spearman rank correlation and ordinal regression methods are used to examine the impact of financial management behaviour on the performance of the SOEs.

Results from the analysis gave diverse incites to the relationship between financial management behaviour, budget slack adoption, and the performance of the SOEs in Nigeria. For instance, after the development of the FMBS, the result showed that the Socio-Cultural Beliefs Management Sub-scale (SCBMS), which is an additional sub-scale added to the initial forum sub-scales used by the previous study, was very significant in measuring the FMBs of the administrators in the SOEs in Nigeria. On the other hand, the cash management sub-scale, savings/investment management sub-scale, and Socio-Cultural Beliefs Management Sub-scale remain the most influential among the measurement of the FMBS of the administrators. Furthermore, the result shows that 46 out of the 385 administrators have very irresponsible FMBS, 157 have irresponsible FMBS, 182 have responsible FMBS, whole none have very responsible FMBS. Regarding percentage generally, about 52% of the sampled administrators have irresponsible FMBS, while 48% have responsible FMBS. The result on the determinant of FMBS indicates that financial literacy, financial knowledge, income, and family size are the main determinants of the financial management behaviour of administrators of the SOEs.

On the results of the moderating effect of budget slack on the FMBS, the result indicated that. budget slack largely does not have a moderating effect on FMBS. Notwithstanding, the impact of financial knowledge on FMBS remains the only one affected by budget slack adoption. Other determinants of FMBS directly affect FMBS without any moderating impact from the budget slack. Incomes, family size, financial literacy, and qualification, among others, directly influence FMBS. In addition, the result further shows that budget slack usage is only affected by optimism. Other factors do not have an individual effect on budget slack usage. Notwithstanding, all the variables jointly have a significant impact on budget slack usage these factors are optimism, and self-control: deliberative thinking, family size, and financial literacy.

Finally, the result regarding the relationship between financial management behaviour and the performance of SOEs indicates that irresponsible financial management behaviour has a more significant effect on SOEs' performance than responsible financial management behaviour. The FMBS, in general, does not have an impact on SOEs' performance, but when the FMBS was divided into various levels of FMBS responsibilities, it was found that irresponsible FMBS has the most significant effect on the performance of the SOEs. Other factors impacting FMBS significantly are total assets, government policy, and the number of employees. However, government allocation is the only variable that does not significantly impact the SOEs' performance.

10.2 IMPLICATIONS AND CONCLUSIONS

The study findings draw some implications and inferences from them, leading to some germane conclusions. Firstly on the FMBS scale computation for the Administrators in the SOEs in Nigeria, it was discovered that this study added the fifth sub-scale to capture socio-cultural beliefs in this part of the work, which has been described as affecting the financial management behaviour of people generally. It was gathered that Africans, especially Nigerians, prioritize socio-cultural beliefs, including religious and traditional beliefs. These were established; hence, a scale to capture this was developed and added to the existing four scales in the literature as sub-scales of the FMBS. Findings from the study indicate that Socio-cultural beliefs management sub-scales (SCBM) have one of the most significant effects on the FMBS out of the five scales. It measures about 30% of the movement in the FMBS. This leads to the conclusion that the financial management behaviour of the SOE administrators at the federal level in Nigeria is strongly measured by their Socio-cultural beliefs. In other words, it is concluded from this study that the socio-cultural ideas of the administrators are an essential measurement of FMBS. This conclusion justifies the inclusion of this sub-scale as part of the Financial management behaviour scale FMBS

Secondly, after the development of the scale, it was discovered that the cash management sub-scale is the most significant sub-scale among the five FMBS sub-scale. The result implies that the cash management sub-scale mainly measures the financial management behaviour of the administrators in the SOEs. This conclusion underscores the importance of cash management in the financial management behaviour measurement of individual administrators captured under the study.

Thirdly still on the conclusions on the FMBS development, the study confirmed that the insurance sub-scale is the weakest measure of the financial management behaviour of the administrators. Results from the analysis indicate that most administrators do not prioritize the insurance scale as a measure of their financial management behaviour. As emphasised under the discussion of findings, it was discovered that apart from the health insurance policy, which is made mandatory for federal civil servants alone, other insurance policies like life assurance, other property, and vehicle insurances do not play any active impact in the measurement of the financial management behaviour of most of the administrators in the SOEs. This conclusion further underscores the extent of the lip services paid to insurance policies generally in Nigeria. Furthermore, it was gathered from the literature under discussion from findings that it is no longer news in Nigeria that many households do not have any active life assurance policy, let alone a genuine vehicle insurance policy. With this situation, the conclusion can't be agreed less that there is little role insurance play in measuring the financial management behaviour of administrator in the federal SOEs in Nigeria.

Finally, on the FMBS development, it is also concluded that the numbers of administrators with irresponsible financial management behaviour are more than those with responsible financial management behaviour. From the study, the addition of the number of administrators with very irresponsible financial management behaviour and those with irresponsible financial management behaviour is more than the number of administrators with responsible financial management behaviour. It was also discovered that none of the administrators fell into responsible financial management behaviour. This revelation has further shown that many of the administrators in the federal SOEs in Nigeria will tend to perpetrate financial fraud with the magnitude of the officer's irresponsible financial management behaviour.

On the determinants of FMBS, the study also discovered some results which led to some findings that touch on the influences of some factors on the financial management behaviour of the administrators. Firstly, it was deduced from the study that, for instance, the result has shown that Financial Knowledge might not influence FMBS positively. The implication is that having a very good knowledge of disciplines related to finance, economics, and accounting does not make an administrator financially responsible. Therefore the ability to understand deeply financial concepts and economic and basic accounting concepts does not mean that an administrator will be very responsible or responsible for financial management behaviour. Also, the ability of an

administrator to have good knowledge of these disciplines does not mean that such administrators will have irresponsible financial management behaviour.

Secondly, financial literacy, which means having just an idea but not in-depth knowledge of these finance-related disciplines, significantly impacts FMBS. The study concludes that an administrator does not need in-depth knowledge of these disciplines before being financially responsible. This is evident from the findings of these results where financial literacy, which emphasises just ideas, improves responsible financial management behaviour while having an in-depth understanding (Financial Knowledge) does not. It is important to know that having general knowledge that not being illiterate is enough to make one develop responsible financial management behaviour.

Thirdly and still on the determinants of FMBS, the family size was shown to have a significant inverse relationship with FMBS. Consequently, the study concludes that the larger the family size, the more irresponsible financial management behaviour that is likely to be shown by the administrators. It is clear from these findings that other conclusions from some studies that the family responsibilities of households across the globe are an essential factor to reckon with in the financial management behaviour of individual households are also valid for the administrators in the federal SOEs in Nigeria. Generally, conclusions from this study have further shown that administrators with large family sizes are more likely to have poor cash management, credit management, savings, and investment management, among others.

Again, income remains the most important factor that affects financial management behaviour. This is another important conclusion from this study. There was overwhelming evidence from the study to arrive at this conclusion. The income of the administrators proved from the analysis to be the highest influencer of their financial management behaviour. Although it should be noted that income distribution is directly linked with poverty level, consequently and by extension, it can be deduced from the study that income level or the poverty level among the officers of the SOEs could be a factor that can dictate their financial management behaviour. This does not indicate that greed does not have a role to play because many administrators with high incomes still indulge in irresponsible financial management behaviour. However, primarily, this study has shown that income level can dictate the degree of financial management behaviour, and the officer will display that is either responsible or irresponsible FMB, especially among the administrators of the SOEs in Nigeria.

Lastly, the conclusion regarding the determinants of financial management behaviour has been revealed in the study that academic qualification or educational background does not significantly impact the financial management behaviour of the administrators in the federal-level SOEs in Nigeria. This conclusion appears to go along with the earlier decision on financial knowledge, where it was discovered that an in-depth understanding of performance-related disciplines does not significantly affect financial management behaviour. The same conclusion is coming up under educational qualifications, where educational attainment in life might not have any significant role in who will have irresponsible financial management behaviour or who will not.

On the moderating effect of budget slack on FMB, the study discovered a weak relationship between budget slack and FMB through a few variables. In other words, it was found that a few factors that determine FMBs were affected by the adoption of budget slack, while many were not affected. The study concluded that most administrators are aware of the adoption of budget slack and adopt it in their day-to-day financial commitments domestically. Notwithstanding, many of them, which are about 40%, are not aware and have not used it before. Therefore it implies that individual effort to moderate financial management behaviour has been happening among the administrators of the SOEs at the federal level of Nigeria.

Secondly, it can be deduced from the findings of this study that budget slack affects the strength and the direction of the effect of financial knowledge on the FMBS. A valid and significant relationship was found between budget slack and financial expertise, and this relationship affects the impact of financial knowledge on FMB. It follows that administrators that adopt budget slack can significantly influence how their financial knowledge affects their financial management behaviour. Generally, the study concludes here that if an administrator deliberately cuts their projected revenue or deliberately increases their expenditure to force them to work within a certain level of budget constraints domestically, this action will influence how their in-depth knowledge of finance-related disciplines affects their financial management behaviour.

Thirdly, the study found that all other determinants of FMBS directly affect FMBS without the moderating effect of adopting budget slack. It implies that income, family size, and financial literacy will continue to affect the financial management behaviour of the administrators significantly regardless of the adoption of budget slack or not. Hence, whether an administrator adopts budget slack or has no qualification or locus of control will still not significantly affect their

FMB. Therefore only one variable out of all the six variables used as a determinant of FMB is affected by the adoption of budget slack. It implies that budget slack might not have a significant moderating effect on the financial management behaviour of the administrators. Consequently, activities like deliberate cuts in projected revenue or an increase in projected expenditure will have little or no effect at all on the financial management behaviour of the administrators of the SOEs in Nigeria.

The following conclusions are made regarding the determinants of the usage of budget slack. In the first place, the study discovered that the primary driver of the adoption of budgets slack among the administrators using it is the level of their optimism. It is concluded from the findings of this study that the administrators are all optimistic about uncertainties in the future. They are usually afraid of uncertainties regarding their finances and try to take cognizance of them by adopting budget slack. Therefore the fear of uncertainties about their future finance remains the major reason why those administrators adopt budget slack. In the same vein, deliberative thinking too can drive an administrator to adopt budget slack. Engaging in deep thought and not just intuitive thinking can encourage an administrator to adopt budget slack. In a nutshell, this study has shown that the more an administrator engages in any one of the two that is deliberative thinking or optimism, the more the chance of using budget slack.

Again, it is very clear that self-control, family size, and financial literacy are not the main reason they adopt budget slack. Rather, it is because of fear of uncertainties in their future income and expenses, which they cannot predict at a particular period.

The following conclusions are made from the study on the impact of FMBS on the performance of the SOEs, which is a major objective of this study. Firstly, it is confirmed that the financial management behaviour of the administrators has a significant impact on the performance of the SOEs at the federal level in Nigeria. Furthermore, the effect of the activities of administrators with irresponsible and very irresponsible financial management behaviour has the most adverse influence on the performance of the SOEs. On the other hand, the activities of the administrators with responsible financial management behaviours failed to influence the SOEs' performance significantly, although it does have a positive relationship.

Secondly, and still, on the performance of SOEs, it was also deduced from the study that government policy remains one of the most critical factors that can also affect the performance of

the SOEs. The study establishes that the direction of government policy at a particular period is an important factor that dictates the pace of performance of the SOEs in Nigeria. Similarly, both the total assets and the employees engaged in the SOEs expectedly are also important drivers of the performance of the SOEs.

Again, government allocation, which is described as a significant incentive from the government to the SOEs in Nigeria to promote and support their performances, has been shown by the study as not significant enough to influence the performance of the SOEs. Therefore, another important conclusion from this study is that government funding of the SOEs sector in Nigeria is abysmal; hence it has not been significantly promoting the growth of the various SOEs at the federal level in Nigeria.

10.3 POLICY RECOMMENDATIONS

Following the conclusions drawn from this study, some important recommendations are essential.

10.3.1 Prioritization of socio-cultural beliefs in measuring SOEs administrators' FMB:

It is clear from the study that the socio-cultural views of the administrators in the SOEs in Nigeria are fundamental in measuring their financial management behaviour. Consequently, activities that constitute socio-cultural attributes of administrators of SOEs, such as religion, culture, and traditional background, should be taken cognizance of when assessing the financial management behaviour of administrators in the SOEs of the Federal government of Nigeria.

10.3.2 Paying more attention to the cash management ability of administrators during an assessment of their FMB

The study has established that fact the ability to manage cash very well by paying up bills when due and ensuring that money in hand is spent judiciously, among others, are very germane to measuring of FMB of the administrator. Therefore, during the investigation or assessment of an administrator's suitability for a particular post of responsibility, especially one that deals with finance, special attention should be given to cash management ability.

10.3.3 Adoption of FMBS to assess the suitability of administrators for positions in the SOEs:

Conclusions and various findings from this study have attested that the FMBS developed from this study appears to take cognizance of a peculiarity of the attributes of the selected respondents,

namely the administrators of the SOEs at the federal level in Nigeria. Therefore, this FMBS can be adapted to screen applicants for a position that will have to do with finance management. In the same vein, this scale can also be adapted for appointments. Therefore, prospective administrators can be asked to complete this measurement scale instrument developed from this study and the FMBS of individual applicants is computed based on that and other criteria that the concerned stakeholders' appointments might determine can be made in a way that individuals with irresponsible FMBS are minimised among the administrators in the SOEs in Nigeria.

10.3.4 Reduction in the number of administrators with irresponsible FMBS in Nigerian SOEs.

The federal government of Nigeria must make concerted efforts to reduce the number of administrators with irresponsible financial management behaviour in the SOEs workforce. Findings from the study confirmed that the numbers of administrators with irresponsible FMBS are more than those with responsible FMBS. This is a wrong signal for the SOEs sector in the country, and no wonder the financial mismanagement in the SOEs continued over the years unabated. Therefore, to stem the tide of rising financial fraud and mismanagement prominent in the SOEs sector, efforts should be made to eliminate the officers with irresponsible FMBS in the workforce.

10.3.5 Improvement in income and other working conditions of the Administrators in the SOEs

Findings from the study have shown that the most critical factor affecting administrators' financial management behaviour is their income level. Unfortunately, Nigeria remains one of the countries with the lowest minimum wage in the Sub Sahara Africa. This is encouraging irresponsible financial management behaviour among the administrators. By extension rise in the level of poverty is an important factor that triggers irresponsible financial management behaviour. Consequently, it is advised that the federal government look at the issue of minimum wage in Nigeria and find a way to increase it, as this may discourage irresponsible financial management behaviour among the administrators of the SOEs.

10.3.6 Intensification of efforts on population reduction

Family size was shown in the study as an important factor affecting the FMB of the administrators; therefore, an increase in the number of dependents among individual households should be

discouraged. Furthermore, a rise in the number of family sizes of the administrators was found to promote irresponsible FMB. Therefore, there should be an effort to increase the advocacy for family planning and other programs that will discourage a rise in family sizes among administrators.

10.3.7 Encouragement of financial literacy among the administrators

The study showed that a little knowledge or general knowledge of finance-related disciplines and not necessarily in-depth knowledge of these disciplines could help improve the financial management behaviour of the administrators. On this note, it is recommended that stakeholders in the appointment of administrators into offices at the federal level in Nigeria should take note of their financial literacy attributes. This effort might go a long way to encourage responsible financial management behaviour among the administrators of the SOEs.

10.3.8 Reduction in the reliance on the adoption of budget slack as moderator of FMB

Furthermore, the result from the study showed that budget slack has no major role to play in moderating financial management behaviour; consequently, the level of reliance on it by those administrators indulging in it should be reduced because it might not have a significant moderating effect on their financial management behaviour. Although it was shown in the study that a sizeable number of administrators do adopt it, it has been shown that it has a minor effect on their financial management behaviour.

10.3.9 More focus on FMBS of administrators as a factor affecting SOEs performance in Nigeria.

The overwhelming confirmation from all levels of analysis and results in this study on the strong effect of FMBS on the performance of the SOEs is a pointer to the fact that the federal government of Nigeria should pay more attention to the financial; behaviours of administrators in these SOEs if their performances are to be improved. The rising cases of financial fraud and corruption in the sector indicate that individuals with irresponsible financial management behaviour are festering unhindered in the SOEs. It was discovered from the literature reviewed in the study that individuals with Irresponsible financial management behaviour are most likely to perpetrate fraudulent acts hence the negative effect of irresponsible FMBS on the performance of the SOEs.

10.3.10 Implementation of more favourable government policy to improve the performance of the SOEs

The study established a significant relationship between government policy and the performance of the SOEs. SOEs being agencies that the government directly controls, they are highly susceptible to the effect of government policy. Consequently, the Nigerian government should be mindful of policies that will not promote the growth of the SOEs in the country. Records have shown that many approaches, such as indigenization, privatization, commercialization, and deregulation, have mixed effects on the SOEs in Nigeria. Nevertheless, these policies are important dictators of the performances of the SOEs over the years.

10.3.11 Improvement in government allocation to the SOEs

This study has joined previous studies to underscore the importance of government funding in the SOEs' performance. However, it was discovered from this study that government allocation does not play a significant role in promoting the performance of the SOEs in Nigeria. Consequently, this study joins the advocacy for improved funding of the SOEs in Nigeria, and the government should try to do this as a matter of urgency to save many of the SOEs already in a comatose position.

10.4 CONTRIBUTIONS TO KNOWLEDGE AND LITERATURE

Firstly, from the reviewed literature, it has been discovered that many studies have developed different measurements for FMB. However, the most acceptable and widely used one is that of Xiao and Dew (2014). Many studies have used their scale to measure the FMB of different sets of people in different sectors in some economies. However, the scale developed by Xiao and Dew (2014) used four domains: the savings and investment domain, cash management domain, credit management domain, and insurance domain. According to Fitzsimmons, Hira, Bauer, and Hafstrom (1993), who were among the earliest authors on FMBS, the development emphasised the socio-cultural sub-scale as an important scale to measure FMB. Xiao and Dew did not use this Sub-scale (2014), and this is necessary due to the nature of Africans generally, whose socio-cultural beliefs influence their financial behaviours. According to Shiller (2019), social functions, religion, and traditional and cultural beliefs significantly link with FMB. This study has contributed to knowledge by empirically testing the efficacy of the socio-cultural beliefs scale as an important measurement sub-scale of the FMBS. The sociocultural belief scale proved from the

findings of this study to be an important instrument that can be used to develop the FMBS scale for the administrators of SOEs in Nigeria. This is a germane contribution to knowledge by the study because, to the best of the knowledge, the author's study has used this sub-scale in the development or construction of FMBS.

Secondly, reviewed literature shows divergent views on factors affecting FMB. Some studies generally identified education, financial literacy, financial knowledge, locus of control, and income as factors that affect FMB (Prihartono and Asandimitra, 2019). On the other hand, only one study considered demographic features as factors influencing FMB (Mien and Thao, 2015). This study has contributed to the existing literature and, by extension, knowledge with the inclusion of family size and income distribution as determinants of FMBS. The analysis showed that the two names, income distribution and family size, are part of the factors with the most significant impact on FMBS. This result justifies their conclusion of the study and thus adds to the existing knowledge on determinants of FMBS. In the same vein, it appears that none of the previous empirical studies used public servants, who are the focus of this study as their case study. Since the nature of the job plays an important role in FMB, this study used the SOEs in the Nigerian public sector as the case study and thus constituted a major departure from what was obtainable in previous studies.

Thirdly, empirical studies have shown that their literature is scarce on budget slack and FMB. As earlier pointed out, the creation of budget slacks is primarily designed for managers in charge of budget preparations in corporate organisations to meet their targets (Putra, Albab, and Swara, 2019). Therefore, their application to an individual personal budget is scarce. The only study related to budget slack is that of Kahar and Mahdi (2018), where the impact of budget slack on job satisfaction was examined in the Indonesian public sector. Apart from the fact that the study did not investigate the role of budget slack on financial management behaviour, it was based on a country outside Africa that may have a different working environment from that of Africa. In addition, factors affecting the application of budget slack have been one of the contentious issues surrounding its usage, and none of the previous studies has investigated this. This study, apart from analysing and investigating the relationship and the moderating effect of budget slack adoption on

FMB, the study has also come up with some vital conclusions of factors that can determine the usage of budget slack among the administrators in the SOEs in Nigeria.

Lastly, studies on the relationship between FMB and organisational performance have concentrated on different sets of people in society other than the public servant, who is the focus of this study. The private sector, used by many of the studies reviewed, is expected to give a different result from the public sector because the private individual bears the brunt of financial mismanagement, and hence there is likely to be closer supervision to guide against its occurrence. The use of public servants to investigate the impacts of financial management behaviour on organisation performance is another area the study has contributed to in the existing literature.

10.5 AREAS FOR FURTHER STUDY

This study remains an eye-opener to the domestication of FMBS, which previous empirical studies have developed to study the financial management behaviours of some groups of individuals in different environments. Studies following this research effort can also try to domesticate the computation of FMBS in their respective geographical locations using another set of individuals. This further verifies that the FMBS can vary depending on demographic or geographical setup.

Some studies have emphasised some psychological factors as determinants of FMBS, but this has not been captured in this study as there is a want of previous studies on these factors. Consequently, researchers who follow this research work can take the determinants of FMBS further by investigating these psychological factors and adding them to the determinants

It was noted from the study that the application of budget slack to individual financial decisions is very scanty in the literature. Therefore, further studies are expected and encouraged in this regard. This will further give insights into the role of budget slack in the financial management behaviour of individuals across the globe.

Although there are couples of literature to establish the link between financial management behaviour and financial mismanagement, further studies can focus more on this area by further assessing the correlation or the relationship between financial management behaviour and financial mismanagement or corruption generally.

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APPENDIX

BIODATA

Age

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|----------------|--------------------|-----------|----------|----------------|---------------------|
| Valid | 30 to 39 years | 57 | 14.7 | 14.8 | 14.8 |
| | 40 to 49 years | 166 | 42.9 | 43.1 | 57.9 |
| | 50 to 59 years | 136 | 35.1 | 35.3 | 93.2 |
| | 60 years and above | 26 | 6.7 | 6.8 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing System | | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

Gender

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|----------------|--------|-----------|----------|----------------|---------------------|
| Valid | Male | 338 | 87.3 | 87.8 | 87.8 |
| | Female | 47 | 12.1 | 12.2 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing System | | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

Family Size

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|--|--|-----------|----------|----------------|---------------------|
|--|--|-----------|----------|----------------|---------------------|

| | | | | | |
|---------|-----------------|-----|-------|-------|-------|
| Valid | Between 2 and 4 | 164 | 42.4 | 42.6 | 42.6 |
| | between 5 and 7 | 181 | 46.8 | 47.0 | 89.6 |
| | 8 and above | 40 | 10.3 | 10.4 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing | System | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

| Monthly Income | | | | | |
|----------------|--------------------|-----------|----------|----------------|---------------------|
| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
| Valid | N50,000-N99,000 | 88 | 22.7 | 22.9 | 22.9 |
| | N100,000-N199,000 | 135 | 34.9 | 35.1 | 57.9 |
| | N200,000-N399,000 | 121 | 31.3 | 31.4 | 89.4 |
| | N400,000 and above | 41 | 10.6 | 10.6 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing | System | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

| Years in Service | | | | | |
|------------------|---------------|-----------|----------|----------------|---------------------|
| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
| Valid | under 5 years | 27 | 7.0 | 7.0 | 7.0 |
| | 5-10 years | 168 | 43.4 | 43.6 | 50.6 |

| | | | | | |
|---------|--------------------|-----|-------|-------|-------|
| | 11 - 15 years | 138 | 35.7 | 35.8 | 86.5 |
| | 16 years and above | 52 | 13.4 | 13.5 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing | System | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

Year in Current Position

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|---------|--------------------|-----------|----------|----------------|---------------------|
| Valid | under 5 years | 70 | 18.1 | 18.2 | 18.2 |
| | 5-10 years | 163 | 42.1 | 42.3 | 60.5 |
| | 11 - 15 years | 126 | 32.6 | 32.7 | 93.2 |
| | 16 years and above | 26 | 6.7 | 6.8 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing | System | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

Highest Qualification

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|---------|----------------------------|-----------|----------|----------------|---------------------|
| Valid | First degree or equivalent | 231 | 59.7 | 60.0 | 60.0 |
| | Masters degree | 121 | 31.3 | 31.4 | 91.4 |
| | PhD | 31 | 8.0 | 8.1 | 99.5 |
| | Others | 2 | .5 | .5 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing | System | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

| | | | | | | |
|--|---------------------------------|----|------|--------------|----|------|
| | | | | | | |
| | | | | | | |
| <p>The size of the organisation has been expanding over the last five years</p> <p>The workforce of the organisation has been rising within the last five years</p> <p>Government allocation is an important source of capital</p> <p>Government policy like Inflation rate affects our performance</p> <p>FMBS</p> <p>ORP</p> | | | | | | |
| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
| | Statistic | df | Sig. | Statistic | df | Sig. |

| | | | | | | |
|--|------|-----|------|------|-----|------|
| | | | | | | |
| | | | | | | |
| The size of the organisation has been expanding over the last five years | | | | | | |
| The workforce of the organisation has been rising within the last five years | .207 | 385 | .000 | .890 | 385 | .000 |
| Government allocation is an important source of capital | | | | | | |
| Government policy like Inflation rate affects our performance | | | | | | |
| FMBS | | | | | | |
| ORP | | | | | | |
| | .238 | 385 | .000 | .889 | 385 | .000 |

| | | | | | | |
|--|------|-----|------|------|-----|------|
| | | | | | | |
| The size of the organisation has been expanding over the last five years | | | | | | |
| The workforce of the organisation has been rising within the last five years | .168 | 385 | .000 | .889 | 385 | .000 |
| Government allocation is an important source of capital | | | | | | |
| Government policy like Inflation rate affects our performance | | | | | | |
| FMBS | | | | | | |
| ORP | | | | | | |
| | .243 | 385 | .000 | .879 | 385 | .000 |

| | | | | | | |
|--|------|-----|------|------|-----|------|
| | | | | | | |
| The size of the organisation has been expanding over the last five years | | | | | | |
| The workforce of the organisation has been rising within the last five years | .161 | 385 | .000 | .887 | 385 | .000 |
| Government allocation is an important source of capital | | | | | | |
| Government policy like Inflation rate affects our performance | | | | | | |
| FMBS | | | | | | |
| ORP | | | | | | |

Case Processing Summary

| | Cases | | | |
|--|-------|----------|---------|----------|
| | Valid | | Missing | |
| | N | Per cent | N | Per cent |
| The size of the organisation has been expanding over the last five years | 385 | 99.5% | 2 | .5% |
| The workforce of the organisation has been rising within the last five years | 385 | 99.5% | 2 | .5% |
| Government allocation is an important source of capital | 385 | 99.5% | 2 | .5% |
| Government policy like Inflation rate affects our performance | 385 | 99.5% | 2 | .5% |
| FMBS | 385 | 99.5% | 2 | .5% |
| ORP | 385 | 99.5% | 2 | .5% |

Descriptive

| | | | Statistic | Std. Error |
|--|--|-------------|-----------|------------|
| The size of the organisation has been expanding over the last five years | Mean | | 3.4364 | .05980 |
| | 95% Confidence Interval for Mean | Lower Bound | 3.3188 | |
| | | Upper Bound | 3.5539 | |
| | 5% Trimmed Mean | | 3.4848 | |
| | Median | | 4.0000 | |
| | Variance | | 1.377 | |
| | Std. Deviation | | 1.17337 | |
| | Minimum | | 1.00 | |
| | Maximum | | 5.00 | |
| | Range | | 4.00 | |
| | Inter-quartile Range | | 2.00 | |
| | Skewness | | -.357 | .124 |
| | Kurtosis | | -.902 | .248 |
| | The workforce of the organisation has been rising within the last five years | Mean | | 3.5636 |
| 95% Confidence Interval for Mean | | Lower Bound | 3.4481 | |
| | | Upper Bound | 3.6792 | |
| 5% Trimmed Mean | | | 3.6140 | |
| Median | | | 4.0000 | |
| Variance | | | 1.330 | |
| Std. Deviation | | | 1.15322 | |
| Minimum | | | 1.00 | |
| Maximum | | | 5.00 | |
| Range | | | 4.00 | |
| Interquartile Range | | | 2.00 | |
| Skewness | | | -.299 | .124 |
| Kurtosis | | | -.846 | .248 |
| Government allocation is an important source of capital | | Mean | | 3.7143 |
| | 95% Confidence Interval for Mean | Lower Bound | 3.6135 | |
| | | Upper Bound | 3.8151 | |

| | | | | |
|---|----------------------|-------------|---------|--------|
| | 5% Trimmed Mean | | 3.7525 | |
| | Median | | 4.0000 | |
| | Variance | | 1.012 | |
| | Std. Deviation | | 1.00593 | |
| | Minimum | | 1.00 | |
| | Maximum | | 5.00 | |
| | Range | | 4.00 | |
| | Inter-quartile Range | | 1.00 | |
| | Skewness | | -.468 | .124 |
| | Kurtosis | | -.525 | .248 |
| Government policy like Inflation rate affects our performance | Mean | | 3.3584 | .06395 |
| | 95% Confidence | Lower Bound | 3.2327 | |
| | Interval for Mean | Upper Bound | 3.4842 | |
| | 5% Trimmed Mean | | 3.3983 | |
| | Median | | 3.0000 | |
| | Variance | | 1.574 | |
| | Std. Deviation | | 1.25472 | |
| | Minimum | | 1.00 | |
| | Maximum | | 5.00 | |
| | Range | | 4.00 | |
| | Inter-quartile Range | | 1.50 | |
| | Skewness | | -.344 | .124 |
| | Kurtosis | | -.857 | .248 |
| FMBS | Mean | | .0000 | .05096 |
| | 95% Confidence | Lower Bound | -.1002 | |
| | Interval for Mean | Upper Bound | .1002 | |
| | 5% Trimmed Mean | | .0278 | |
| | Median | | -.2504 | |
| | Variance | | 1.000 | |
| | Std. Deviation | | 1.00000 | |
| | Minimum | | -1.73 | |
| | Maximum | | 1.23 | |

| | | | | |
|-----|----------------------------------|-------------|--------|--------|
| | Range | | 2.97 | |
| | Inter-quartile Range | | 2.22 | |
| | Skewness | | -.261 | .124 |
| | Kurtosis | | -1.112 | .248 |
| ORP | Mean | | 3.5403 | .03254 |
| | 95% Confidence Interval for Mean | Lower Bound | 3.4763 | |
| | | Upper Bound | 3.6042 | |
| | 5% Trimmed Mean | | 3.5565 | |
| | Median | | 3.6667 | |
| | Variance | | .408 | |
| | Std. Deviation | | .63843 | |
| | Minimum | | 1.33 | |
| | Maximum | | 5.00 | |
| | Range | | 3.67 | |
| | Interquartile Range | | 1.00 | |
| | Skewness | | -.429 | .124 |
| | Kurtosis | | .280 | .248 |

Tests of Normality

| | Kolmogorov-Smirnov ^a | | | Shapiro-Wilk | | |
|--|---------------------------------|-----|------|--------------|-----|------|
| | Statistic | df | Sig. | Statistic | df | Sig. |
| The size of the organisation has been expanding over the last five years | .238 | 385 | .000 | .889 | 385 | .000 |
| The workforce of the organisation has been rising within the last five years | .168 | 385 | .000 | .889 | 385 | .000 |
| Government allocation is an important source of capital | .243 | 385 | .000 | .879 | 385 | .000 |
| Government policy like Inflation rate affects our performance | .186 | 385 | .000 | .899 | 385 | .000 |
| FMBS | .161 | 385 | .000 | .887 | 385 | .000 |
| ORP | .142 | 385 | .000 | .963 | 385 | .000 |

a. Lilliefors Significance Correction

| Correlations | | | | | | | |
|---------------------|-------------|-------------------------|-------------|-----------|------|-----------------------|-----------|
| | | | Total Asset | Employees | FMBS | Government allocation | Gover pol |
| Spearman's rho | Total Asset | Correlation Coefficient | 1.000 | -.033 | .006 | .059 | |
| | | Sig. (2-tailed) | . | .516 | .911 | .245 | |
| | | N | 385 | 385 | 385 | 385 | |
| | Employees | Correlation | -.033 | 1.000 | .060 | .030 | |

| | | | | | | | |
|----------------------------|--|-------------------------|--------|--------|--------|-------|--|
| | | Coefficient | | | | | |
| | | Sig. (2-tailed) | .516 | . | .239 | .551 | |
| | | N | 385 | 385 | 385 | 385 | |
| FMBS | | Correlation Coefficient | .006 | .060 | 1.000 | .070 | |
| | | Sig. (2-tailed) | .911 | .239 | . | .168 | |
| | | N | 385 | 385 | 385 | 385 | |
| Government allocation | | Correlation Coefficient | .059 | .030 | .070 | 1.000 | |
| | | Sig. (2-tailed) | .245 | .551 | .168 | . | |
| | | N | 385 | 385 | 385 | 385 | |
| Government policy | | Correlation Coefficient | .089 | .105* | .179** | .051 | |
| | | Sig. (2-tailed) | .080 | .040 | .000 | .318 | |
| | | N | 385 | 385 | 385 | 385 | |
| Organisational performance | | Correlation Coefficient | .599** | .569** | .021 | .086 | |
| | | Sig. (2-tailed) | .000 | .000 | .688 | .091 | |
| | | N | 385 | 385 | 385 | 385 | |

| | | | | | |
|---|--|--|--|--|--|
| ** . Correlation is significant at the 0.01 level (2-tailed). | | | | | |
| * . Correlation is significant at the 0.05 level (2-tailed). | | | | | |

Model Fitting Information

| Model | -2 Log Likelihood | Chi-Square | df | Sig. |
|----------------|-------------------|------------|----|------|
| Intercept Only | 1540.769 | | | |
| Final | 1017.068 | 523.700 | 5 | .000 |

Link function: Logit.

Goodness-of-Fit

| | Chi-Square | df | Sig. |
|----------|------------|------|-------|
| Pearson | 1674.007 | 1705 | .699 |
| Deviance | 1008.531 | 1705 | 1.000 |

Link function: Logit.

Pseudo R-Square

| | |
|---------------|------|
| Cox and Snell | .743 |
| Nagelkerke | .757 |
| McFadden | .336 |

Link function: Logit.

Parameter Estimates

| | | Estimate | Std. Error | Wald | df | Sig. | 95% Confidence Interval | |
|-----------|--------------|----------|------------|---------|----|------|-------------------------|-------------|
| | | | | | | | Lower Bound | Upper Bound |
| Threshold | [ORP = 1.33] | 5.288 | .950 | 31.004 | 1 | .000 | 3.427 | 7.149 |
| | [ORP = 2.00] | 7.598 | .714 | 113.147 | 1 | .000 | 6.198 | 8.998 |
| | [ORP = 2.33] | 8.610 | .711 | 146.781 | 1 | .000 | 7.217 | 10.003 |
| | [ORP = 2.67] | 10.015 | .742 | 181.989 | 1 | .000 | 8.560 | 11.470 |
| | [ORP = 3.00] | 12.305 | .821 | 224.878 | 1 | .000 | 10.697 | 13.913 |
| | [ORP = 3.33] | 13.956 | .880 | 251.596 | 1 | .000 | 12.232 | 15.681 |
| | [ORP = 3.67] | 15.820 | .946 | 279.879 | 1 | .000 | 13.967 | 17.674 |
| | [ORP = 4.00] | 18.303 | 1.039 | 310.139 | 1 | .000 | 16.266 | 20.340 |
| | [ORP = 4.33] | 20.581 | 1.152 | 319.351 | 1 | .000 | 18.324 | 22.838 |
| | [ORP = 4.67] | 22.300 | 1.237 | 324.885 | 1 | .000 | 19.875 | 24.725 |
| Location | PERF2 | 1.978 | .124 | 253.100 | 1 | .000 | 1.734 | 2.222 |
| | PERF3 | 1.989 | .125 | 252.345 | 1 | .000 | 1.743 | 2.234 |
| | FMBS | -.022 | .096 | .053 | 1 | .818 | -.211 | .167 |
| | PERF4 | .079 | .094 | .695 | 1 | .404 | -.106 | .264 |
| | GOVP | .076 | .077 | .969 | 1 | .325 | -.076 | .228 |

Link function: Logit.

Test of Parallel Lines^c

| Model | -2 Log Likelihood | Chi-Square | df | Sig. |
|-----------------|----------------------|---------------------|----|------|
| Null Hypothesis | 1017.068 | | | |
| General | 958.687 ^a | 58.382 ^b | 45 | .087 |

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. The log-likelihood value cannot be further increased after maximum number of step-halving.

b. The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model.

Validity of the test is uncertain.

c. Link function: Logit.

Using FACTORS AS AGAINST COVARIATES

Model Fitting Information

| Model | -2 Log Likelihood | Chi-Square | df | Sig. |
|----------------|-------------------|------------|----|------|
| Intercept Only | 1540.769 | | | |
| Final | 937.464 | 603.305 | 26 | .000 |

Link function: Logit.

Goodness-of-Fit

| | Chi-Square | df | Sig. |
|----------|------------|------|-------|
| Pearson | 3326.687 | 1684 | .068 |
| Deviance | 928.926 | 1684 | 0.958 |

Link function: Logit.

Pseudo R-Square

| | |
|---------------|------|
| Cox and Snell | .791 |
| Nagelkerke | .805 |
| McFadden | .387 |

Link function: Logit.

Parameter Estimates

| | | Estimate | Std. Error | Wald | df | Sig. | 95% Confidence Interval | |
|------------------|------------------|----------------|------------|---------|------|--------|-------------------------|-------------|
| | | | | | | | Lower Bound | Upper Bound |
| Threshold | [ORP = 1.33] | -18.108 | 1.136 | 254.320 | 1 | .000 | -20.334 | -15.883 |
| | [ORP = 2.00] | -15.719 | .894 | 309.163 | 1 | .000 | -17.471 | -13.967 |
| | [ORP = 2.33] | -14.438 | .833 | 300.335 | 1 | .000 | -16.070 | -12.805 |
| | [ORP = 2.67] | -12.661 | .742 | 290.982 | 1 | .000 | -14.116 | -11.206 |
| | [ORP = 3.00] | -10.033 | .636 | 249.113 | 1 | .000 | -11.279 | -8.787 |
| | [ORP = 3.33] | -8.091 | .564 | 205.622 | 1 | .000 | -9.197 | -6.985 |
| | [ORP = 3.67] | -5.904 | .497 | 141.238 | 1 | .000 | -6.877 | -4.930 |
| | [ORP = 4.00] | -3.236 | .437 | 54.795 | 1 | .000 | -4.093 | -2.379 |
| | [ORP = 4.33] | -.880 | .429 | 4.213 | 1 | .040 | -1.720 | -.040 |
| | [ORP = 4.67] | .992 | .577 | 2.956 | 1 | .086 | -.139 | 2.122 |
| Location | [GOVP=1.00] | -.135 | .414 | .107 | 1 | .744 | -.946 | .676 |
| | [GOVP=2.00] | -.721 | .347 | 4.315 | 1 | .038 | -1.402 | -.041 |
| | [GOVP=3.00] | -1.009 | .297 | 11.542 | 1 | .001 | -1.591 | -.427 |
| | [GOVP=4.00] | -.400 | .301 | 1.763 | 1 | .184 | -.991 | .191 |
| | [GOVP=5.00] | 0 ^a | . | . | 0 | . | . | . |
| | [PERF4=1.00] | .139 | .891 | .024 | 1 | .876 | -1.607 | 1.884 |
| | [PERF4=2.00] | -.291 | .362 | .644 | 1 | .422 | -1.001 | .419 |
| | [PERF4=3.00] | -.007 | .308 | .001 | 1 | .981 | -.611 | .596 |
| | [PERF4=4.00] | -.597 | .273 | 4.788 | 1 | .029 | -1.132 | -.062 |
| | [PERF4=5.00] | 0 ^a | . | . | 0 | . | . | . |
| [FMBS=- 1.73] | -1.082 | .421 | 6.621 | 1 | .010 | -1.906 | -.258 | |
| [FMBS=- 1.73] | -1.265 | .533 | 5.641 | 1 | .018 | -2.310 | -.221 | |
| [FMBS=-.99] | 1.379 | .636 | 4.710 | 1 | .030 | .134 | 2.625 | |

| | | | | | | | |
|------------------|----------------|------|---------|---|------|---------|--------|
| [FMBS=-.99] | .323 | .358 | .812 | 1 | .368 | -.379 | 1.025 |
| [FMBS=-.99] | .200 | .671 | .089 | 1 | .766 | -1.115 | 1.514 |
| [FMBS=-.25] | -.711 | .881 | .651 | 1 | .420 | -2.438 | 1.016 |
| [FMBS=-.25] | -.487 | .322 | 2.288 | 1 | .130 | -1.118 | .144 |
| [FMBS=-.25] | -.258 | .443 | .340 | 1 | .560 | -1.127 | .611 |
| [FMBS=.49] | -.396 | .507 | .609 | 1 | .435 | -1.389 | .598 |
| [FMBS=.49] | -1.187 | .324 | 13.398 | 1 | .000 | -1.822 | -.551 |
| [FMBS=1.23] | 0 ^a | . | . | 0 | . | . | . |
| [PERF3=1.00] | -10.055 | .739 | 185.219 | 1 | .000 | -11.503 | -8.607 |
| [PERF3=2.00] | -6.546 | .463 | 200.216 | 1 | .000 | -7.453 | -5.640 |
| [PERF3=3.00] | -3.355 | .326 | 106.025 | 1 | .000 | -3.993 | -2.716 |
| [PERF3=4.00] | -2.070 | .320 | 41.990 | 1 | .000 | -2.697 | -1.444 |
| [PERF3=5.00] | 0 ^a | . | . | 0 | . | . | . |
| [PERF2=1.00] | -8.924 | .673 | 176.053 | 1 | .000 | -10.243 | -7.606 |
| [PERF2=2.00] | -7.116 | .476 | 223.475 | 1 | .000 | -8.049 | -6.183 |
| [PERF2=3.00] | -4.784 | .413 | 133.968 | 1 | .000 | -5.594 | -3.974 |
| [PERF2=4.00] | -2.073 | .332 | 38.956 | 1 | .000 | -2.724 | -1.422 |
| [PERF2=5.00] | 0 ^a | . | . | 0 | . | . | . |

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Test of Parallel Lines^c

| Model | -2 Log Likelihood | Chi-Square | df | Sig. |
|-----------------|----------------------|---------------------|-----|-------|
| Null Hypothesis | 937.464 | | | |
| General | 841.343 ^a | 96.121 ^b | 234 | 1.000 |

The null hypothesis states that the location parameters (slope coefficients) are the same across response categories.

a. The log-likelihood value cannot be further increased after maximum number of step-halving.

b. The Chi-Square statistic is computed based on the log-likelihood value of the last iteration of the general model.

Validity of the test is uncertain.

c. Link function: Logit.

Parameter Estimates

| | | Estimate | Std. Error | Wald | df | Sig. | 95% Confidence Interval | |
|------------------|------------------|----------------|------------|---------|------|---------|-------------------------|-------------|
| | | | | | | | Lower Bound | Upper Bound |
| Threshold | [ORP = 1.33] | -16.744 | 1.053 | 253.020 | 1 | .000 | -18.807 | -14.681 |
| | [ORP = 2.00] | -14.460 | .823 | 308.545 | 1 | .000 | -16.074 | -12.847 |
| | [ORP = 2.33] | -13.339 | .769 | 300.961 | 1 | .000 | -14.846 | -11.832 |
| | [ORP = 2.67] | -11.662 | .687 | 287.835 | 1 | .000 | -13.009 | -10.315 |
| | [ORP = 3.00] | -9.060 | .581 | 243.109 | 1 | .000 | -10.199 | -7.921 |
| | [ORP = 3.33] | -7.244 | .520 | 194.303 | 1 | .000 | -8.262 | -6.225 |
| | [ORP = 3.67] | -5.225 | .465 | 126.020 | 1 | .000 | -6.137 | -4.313 |
| | [ORP = 4.00] | -2.728 | .414 | 43.413 | 1 | .000 | -3.540 | -1.917 |
| | [ORP = 4.33] | -.416 | .396 | 1.103 | 1 | .294 | -1.192 | .360 |
| | [ORP = 4.67] | 1.427 | .550 | 6.734 | 1 | .009 | .349 | 2.505 |
| Location | FMBS | .038 | .101 | .143 | 1 | .705 | -.160 | .237 |
| | [GOVP=1.00] | -.408 | .387 | 1.111 | 1 | .292 | -1.167 | .351 |
| | [GOVP=2.00] | -.506 | .335 | 2.281 | 1 | .131 | -1.163 | .151 |
| | [GOVP=3.00] | -.924 | .290 | 10.141 | 1 | .001 | -1.493 | -.355 |
| | [GOVP=4.00] | -.569 | .293 | 3.761 | 1 | .052 | -1.144 | .006 |
| | [GOVP=5.00] | 0 ^a | . | . | 0 | . | . | . |
| | [PERF4=1.00] | -.174 | .875 | .040 | 1 | .842 | -1.888 | 1.540 |
| | [PERF4=2.00] | -.378 | .338 | 1.250 | 1 | .264 | -1.042 | .285 |
| | [PERF4=3.00] | -.099 | .294 | .112 | 1 | .737 | -.675 | .478 |
| | [PERF4=4.00] | -.548 | .259 | 4.478 | 1 | .034 | -1.056 | -.040 |
| [PERF4=5.00] | 0 ^a | . | . | 0 | . | . | . | |
| [PERF3=1.00] | -9.798 | .719 | 185.537 | 1 | .000 | -11.208 | -8.388 | |
| [PERF3=2.00] | -6.450 | .448 | 207.474 | 1 | .000 | -7.328 | -5.573 | |

| | | | | | | | |
|------------------|----------------|------|---------|---|------|--------|--------|
| [PERF3=3.00] | -3.321 | .313 | 112.329 | 1 | .000 | -3.935 | -2.707 |
| [PERF3=4.00] | -2.100 | .313 | 44.956 | 1 | .000 | -2.714 | -1.486 |
| [PERF3=5.00] | 0 ^a | . | . | 0 | . | . | . |
| [PERF2=1.00] | -8.022 | .627 | 163.557 | 1 | .000 | -9.252 | -6.793 |
| [PERF2=2.00] | -6.458 | .446 | 209.931 | 1 | .000 | -7.332 | -5.584 |
| [PERF2=3.00] | -4.392 | .393 | 125.169 | 1 | .000 | -5.161 | -3.622 |
| [PERF2=4.00] | -1.629 | .317 | 26.483 | 1 | .000 | -2.250 | -1.009 |
| [PERF2=5.00] | 0 ^a | . | . | 0 | . | . | . |

Link function: Logit.

a. This parameter is set to zero because it is redundant.

Parameter Estimates

| | | Estimate | Std. Error | Wald | df | Sig. | 95% Confidence Interval | |
|-----------|------------------|----------------|------------|---------|----|------|-------------------------|-------------|
| | | | | | | | Lower Bound | Upper Bound |
| Threshold | [ORP = 1.33] | -17.020 | 1.066 | 254.772 | 1 | .000 | -19.110 | -14.930 |
| | [ORP = 2.00] | -14.753 | .837 | 310.909 | 1 | .000 | -16.392 | -13.113 |
| | [ORP = 2.33] | -13.598 | .780 | 304.229 | 1 | .000 | -15.126 | -12.070 |
| | [ORP = 2.67] | -11.929 | .698 | 291.811 | 1 | .000 | -13.298 | -10.560 |
| | [ORP = 3.00] | -9.341 | .596 | 245.291 | 1 | .000 | -10.510 | -8.172 |
| | [ORP = 3.33] | -7.457 | .527 | 200.079 | 1 | .000 | -8.490 | -6.423 |
| | [ORP = 3.67] | -5.364 | .466 | 132.280 | 1 | .000 | -6.278 | -4.450 |
| | [ORP = 4.00] | -2.835 | .414 | 46.995 | 1 | .000 | -3.646 | -2.025 |
| | [ORP = 4.33] | -.528 | .404 | 1.707 | 1 | .191 | -1.320 | .264 |
| | [ORP = 4.67] | 1.349 | .559 | 5.828 | 1 | .016 | .254 | 2.445 |
| Location | [PERF2=1.00] | -8.406 | .641 | 171.945 | 1 | .000 | -9.663 | -7.150 |
| | [PERF2=2.00] | -6.741 | .458 | 216.684 | 1 | .000 | -7.639 | -5.844 |
| | [PERF2=3.00] | -4.564 | .399 | 130.550 | 1 | .000 | -5.347 | -3.781 |
| | [PERF2=4.00] | -1.817 | .321 | 31.995 | 1 | .000 | -2.446 | -1.187 |
| | [PERF2=5.00] | 0 ^a | . | . | 0 | . | . | . |
| | [PERF3=1.00] | -9.983 | .725 | 189.727 | 1 | .000 | -11.404 | -8.563 |
| | [PERF3=2.00] | -6.595 | .454 | 211.224 | 1 | .000 | -7.484 | -5.705 |
| | [PERF3=3.00] | -3.352 | .314 | 113.835 | 1 | .000 | -3.967 | -2.736 |
| | [PERF3=4.00] | -2.094 | .313 | 44.717 | 1 | .000 | -2.708 | -1.480 |
| | [PERF3=5.00] | 0 ^a | . | . | 0 | . | . | . |
| | [GOVP=1.00] | -.332 | .387 | .737 | 1 | .391 | -1.091 | .426 |

| | | | | | | | |
|------------------|----------------|------|--------|---|------|--------|-------|
| [GOVP=2.00] | - .666 | .339 | 3.866 | 1 | .049 | -1.330 | -.002 |
| [GOVP=3.00] | -1.044 | .293 | 12.721 | 1 | .000 | -1.618 | -.470 |
| [GOVP=4.00] | -.674 | .295 | 5.232 | 1 | .022 | -1.252 | -.096 |
| [GOVP=5.00] | 0 ^a | . | . | 0 | . | . | . |
| [PERF4=1.00] | -.132 | .875 | .023 | 1 | .880 | -1.846 | 1.582 |
| [PERF4=2.00] | -.372 | .339 | 1.201 | 1 | .273 | -1.037 | .293 |
| [PERF4=3.00] | -.084 | .295 | .081 | 1 | .776 | -.662 | .494 |
| [PERF4=4.00] | -.556 | .260 | 4.568 | 1 | .033 | -1.066 | -.046 |
| [PERF4=5.00] | 0 ^a | . | . | 0 | . | . | . |
| [FMBSI=.00] | -.611 | .330 | 3.430 | 1 | .064 | -1.257 | .036 |
| [FMBSI=1.00] | .408 | .214 | 3.641 | 1 | .046 | -.011 | .827 |
| [FMBSI=2.00] | 0 ^a | . | . | 0 | . | . | . |

Link function: Logit.

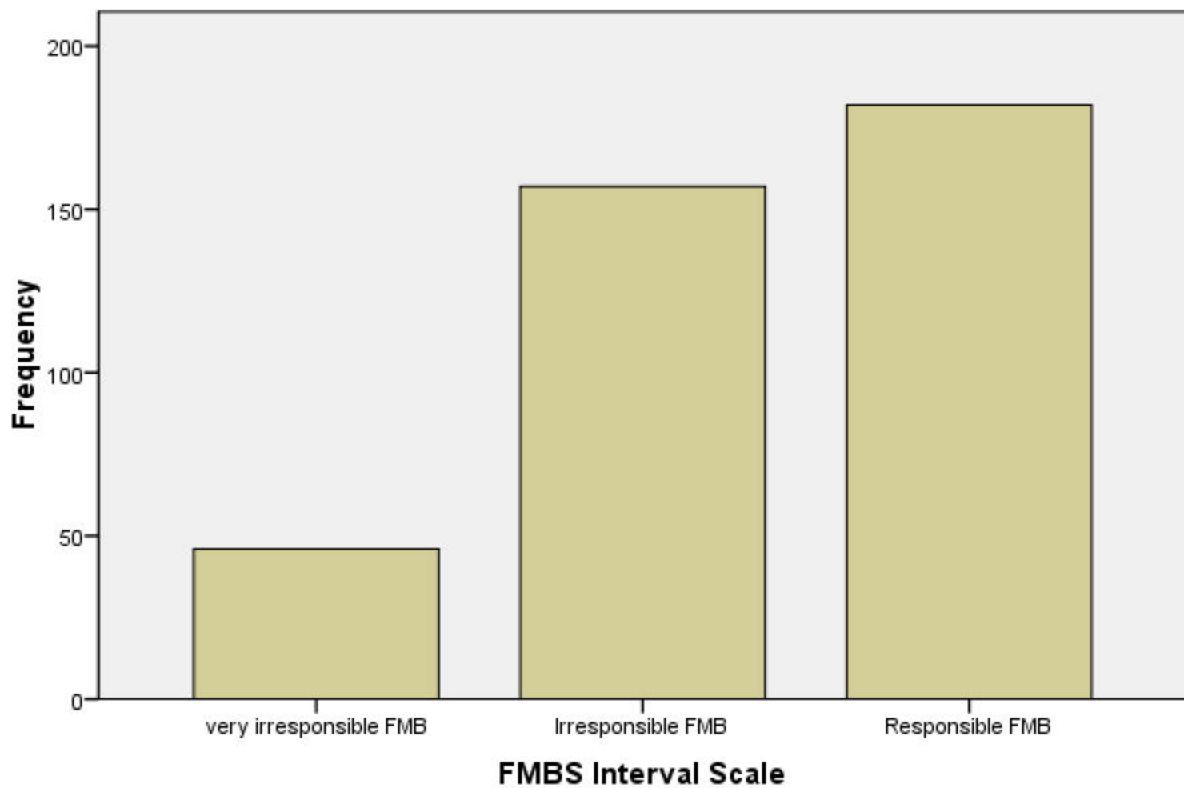
a. This parameter is set to zero because it is redundant.

FMBS DESCRIPTIVES

FMBS Interval Scale

| | | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|---------|------------------------|-----------|----------|----------------|---------------------|
| Valid | very irresponsible FMB | 46 | 11.9 | 11.9 | 11.9 |
| | Irresponsible FMB | 157 | 40.6 | 40.8 | 52.7 |
| | Responsible FMB | 182 | 47.0 | 47.3 | 100.0 |
| | Total | 385 | 99.5 | 100.0 | |
| Missing | System | 2 | .5 | | |
| Total | | 387 | 100.0 | | |

FMBS Interval Scale



MODERATING EFFECT OF BUDGET SLACK RESULTS

Coefficients^a

| Model | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity | |
|-------|-------------------------------|------------|---------------------------|-------|--------|--------------|------|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -1.187E-7 | .051 | | .000 | 1.000 | |
| | Z-score: Financial Knowledge: | .067 | .081 | .067 | .824 | .411 | .388 |
| | Z-score: Budget Slack | .207 | .099 | .207 | 2.085 | .038 | .262 |
| | Z-score(FKBS) | -.268 | .122 | -.268 | -2.191 | .029 | .173 |

a. Dependent Variable: FMBS

Coefficients^a

| Model | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity Stat | |
|-------|-----------------------------|------------|---------------------------|-------|--------|-------------------|------|
| | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -.122 | .152 | -.805 | .422 | | |
| | Financial Knowledge: | .042 | .052 | .067 | .824 | .411 | .388 |
| | Budget Slack | .422 | .203 | .207 | 2.085 | .038 | .262 |
| | FKBS | -.145 | .066 | -.268 | -2.191 | .029 | .173 |

a. Dependent Variable: FMBS

ANOVA^b

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|-------------------|
| 1 | Regression | 6.787 | 3 | 2.262 | 2.285 | .078 ^a |
| | Residual | 377.213 | 381 | .990 | | |
| | Total | 384.000 | 384 | | | |

a. Predictors: (Constant), FKBS, Financial Knowledge: , Budget Slack

b. Dependent Variable: FMBS

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .133 ^a | .018 | .010 | .99502 |

a. Predictors: (Constant), FKBS, Financial Knowledge: , Budget Slack

Collinearity Diagnostics^a

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-------|-----------|------------|-----------------|----------------------|----------------------|--------------|------|
| | | | | (Constant) | Financial Knowledge: | Budget Slack | FKBS |
| 1 | 1 | 3.352 | 1.000 | .01 | .01 | .01 | .01 |
| | 2 | .386 | 2.946 | .09 | .05 | .06 | .06 |
| | 3 | .231 | 3.812 | .11 | .13 | .13 | .08 |
| | 4 | .031 | 10.398 | .79 | .81 | .81 | .85 |

a. Dependent Variable: FMBS

Financial Literacy FL

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity Statistics | |
|-------|--------------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .279 | .209 | | 1.331 | .184 | | |
| | Financial Literacy | -.081 | .053 | -.123 | -1.528 | .127 | .402 | 2.48 |
| | Budget Slack | -.327 | .262 | -.160 | -1.245 | .214 | .158 | 6.32 |
| | FLBS | .099 | .069 | .196 | 1.436 | .152 | .140 | 7.12 |

a. Dependent Variable: FMBS

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .082 ^a | .007 | -.001 | 1.00056 |

a. Predictors: (Constant), Z-score(FLBS), Z-score: Financial Literacy, Z-score: Budget Slack

ANOVA^b

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|------|-------------------|
| 1 | Regression | 2.570 | 3 | .857 | .856 | .464 ^a |
| | Residual | 381.430 | 381 | 1.001 | | |
| | Total | 384.000 | 384 | | | |

a. Predictors: (Constant), Z-score(FLBS), Z-score: Financial Literacy, Z-score: Budget Slack

b. Dependent Variable: FMBS

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity |
|-------|-----------------------------|-----------------------------|------------|---------------------------|--------|-------|--------------|
| | | B | Std. Error | Beta | | | Tolerance |
| 1 | (Constant) | -1.187E-7 | .051 | | .000 | 1.000 | |
| | Z-score: Budget Slack | -.160 | .128 | -.160 | -1.245 | .214 | .158 |
| | Z-score: Financial Literacy | -.123 | .081 | -.123 | -1.528 | .127 | .402 |
| | Z-score(FLBS) | .196 | .136 | .196 | 1.436 | .152 | .140 |

a. Dependent Variable: FMBS

Collinearity Diagnostics^a

| Model | Dimen sion | Eigenvalue | Condition Index | Variance Proportions | | | |
|-------|------------|------------|-----------------|----------------------|--------------------|--------------|------|
| | | | | (Constant) | Financial Literacy | Budget Slack | FLBS |
| 1 | 1 | 3.369 | 1.000 | .00 | .00 | .00 | .01 |
| | 2 | .456 | 2.719 | .03 | .04 | .03 | .04 |
| | 3 | .156 | 4.648 | .10 | .09 | .09 | .13 |
| | 4 | .019 | 13.411 | .87 | .86 | .87 | .83 |

a. Dependent Variable: FMBS

Locus of control

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity Statistics | |
|-------|------------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|-------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .400 | .181 | | 2.218 | .027 | | |
| | Locus of Control | -.137 | .053 | -.201 | -2.576 | .010 | .418 | 2.395 |
| | Budget Slack | -.101 | .234 | -.050 | -.433 | .665 | .195 | 5.137 |
| | LCBS | .040 | .070 | .073 | .570 | .569 | .156 | 6.413 |

a. Dependent Variable: FMBS

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .170 ^a | .029 | .021 | .98929 |

a. Predictors: (Constant), Z-score(LCBS), Z-score: Locus of Control, Z-score: Budget Slack

ANOVA^b

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|-------------------|
| 1 | Regression | 11.119 | 3 | 3.706 | 3.787 | .011 ^a |
| | Residual | 372.880 | 381 | .979 | | |
| | Total | 384.000 | 384 | | | |

a. Predictors: (Constant), Z-score(LCBS), Z-score: Locus of Control, Z-score: Budget Slack

b. Dependent Variable: FMBS

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity |
|-------|---------------------------|-----------------------------|------------|---------------------------|--------|-------|--------------|
| | | B | Std. Error | Beta | | | Tolerance |
| 1 | (Constant) | -1.187E-7 | .050 | | .000 | 1.000 | |
| | Z-score: Budget Slack | -.050 | .114 | -.050 | -.433 | .665 | .195 |
| | Z-score: Locus of Control | -.201 | .078 | -.201 | -2.576 | .010 | .418 |
| | Z-score(LCBS) | .073 | .128 | .073 | .570 | .569 | .156 |

a. Dependent Variable: FMBS

Collinearity Diagnostics^a

| Model | Dimen sion | Eigenvalue | Condition Index | Variance Proportions | | | |
|-------|------------|------------|-----------------|----------------------|------------------|--------------|------|
| | | | | (Constant) | Locus of Control | Budget Slack | LCBS |
| 1 | 1 | 3.368 | 1.000 | .01 | .01 | .01 | .01 |
| | 2 | .430 | 2.800 | .04 | .05 | .05 | .05 |
| | 3 | .178 | 4.345 | .11 | .11 | .10 | .11 |
| | 4 | .023 | 11.973 | .84 | .83 | .85 | .83 |

a. Dependent Variable: FMBS

Family size

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity Statistics | |
|-------|--------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|-------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .200 | .221 | | .905 | .366 | | |
| | Family Size | -.132 | .126 | -.087 | -1.052 | .293 | .386 | 2.589 |
| | Budget Slack | -.302 | .287 | -.148 | -1.054 | .293 | .133 | 7.544 |
| | FZBS | .199 | .161 | .195 | 1.235 | .218 | .105 | 9.496 |

a. Dependent Variable: FMBS

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .065 ^a | .004 | -.004 | 1.00181 |

a. Predictors: (Constant), Z-score(FZBS), Z-score: Family Size, Z-score: Budget Slack

ANOVA^b

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|------|-------------------|
| 1 | Regression | 1.616 | 3 | .539 | .537 | .657 ^a |
| | Residual | 382.384 | 381 | 1.004 | | |
| | Total | 384.000 | 384 | | | |

a. Predictors: (Constant), Z-score(FZBS), Z-score: Family Size, Z-score: Budget Slack

b. Dependent Variable: FMBS

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity Statistics | |
|-------|-----------------------|-----------------------------|------------|---------------------------|--------|-------|-------------------------|-----|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | -1.187E-7 | .051 | | .000 | 1.000 | | |
| | Z-score: Budget Slack | -.148 | .140 | -.148 | -1.054 | .293 | .133 | |
| | Z-score: Family Size | -.087 | .082 | -.087 | -1.052 | .293 | .386 | |
| | Z-score(FZBS) | .195 | .158 | .195 | 1.235 | .218 | .105 | |

a. Dependent Variable: FMBS

Collinearity Diagnostics^a

| Model | Dimension | Eigenvalue | Condition Index | Variance Proportions | | | |
|-------|-----------|------------|-----------------|----------------------|-------------|--------------|------|
| | | | | (Constant) | Family Size | Budget Slack | FZBS |
| 1 | 1 | 3.449 | 1.000 | .00 | .00 | .00 | .00 |
| | 2 | .417 | 2.878 | .03 | .03 | .03 | .03 |
| | 3 | .119 | 5.380 | .11 | .11 | .11 | .10 |
| | 4 | .015 | 15.148 | .85 | .86 | .85 | .87 |

a. Dependent Variable: FMBS

Qualification

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity Statistics | |
|-------|-----------------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|-------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .353 | .210 | | 1.684 | .093 | | |
| | Highest Qualification | -.256 | .134 | -.171 | -1.910 | .057 | .326 | 3.052 |
| | Budget Slack | -.343 | .262 | -.168 | -1.310 | .191 | .158 | 6.340 |
| | QLFBS | .257 | .164 | .237 | 1.569 | .117 | .114 | 8.778 |

a. Dependent Variable: FMBS

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .098 ^a | .010 | .002 | .99907 |

a. Predictors: (Constant), Z-score(QLFBS), Z-score: Highest Qualification, Z-score: Budget Slack

ANOVA^b

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|-------|-------------------|
| 1 | Regression | 3.706 | 3 | 1.235 | 1.238 | .296 ^a |
| | Residual | 380.294 | 381 | .998 | | |
| | Total | 384.000 | 384 | | | |

a. Predictors: (Constant), Z-score(QLFBS), Z-score: Highest Qualification, Z-score: Budget Slack

b. Dependent Variable: FMBS

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity |
|-------|--------------------------------|-----------------------------|------------|---------------------------|--------|-------|--------------|
| | | B | Std. Error | Beta | | | Tolerance |
| 1 | (Constant) | -1.187E-7 | .051 | | .000 | 1.000 | |
| | Z-score: Budget Slack | -.168 | .128 | -.168 | -1.310 | .191 | .158 |
| | Z-score: Highest Qualification | -.171 | .089 | -.171 | -1.910 | .057 | .326 |
| | Z-score(QLFBS) | .237 | .151 | .237 | 1.569 | .117 | .114 |

a. Dependent Variable: FMBS

Collinearity Diagnostics^a

| Model | Dimen sion | Eigenvalue | Condition Index | Variance Proportions | | | |
|-------|------------|------------|-----------------|----------------------|-----------------------|--------------------------------|----------------|
| | | | | (Constant) | Z-score: Budget Slack | Z-score: Highest Qualification | Z-score(QLFBS) |
| 1 | 1 | 1.996 | 1.000 | .00 | .03 | .03 | .03 |
| | 2 | 1.000 | 1.413 | 1.00 | .00 | .00 | .00 |
| | 3 | .944 | 1.454 | .00 | .05 | .24 | .00 |
| | 4 | .060 | 5.756 | .00 | .92 | .73 | .97 |

a. Dependent Variable: FMBS

Income

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. | Collinearity Statistics | |
|-------|----------------|-----------------------------|------------|---------------------------|--------|------|-------------------------|-------|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | .358 | .205 | | 1.748 | .081 | | |
| | Budget Slack | .095 | .270 | .047 | .352 | .725 | .145 | 6.874 |
| | Monthly Income | -.159 | .080 | -.149 | -1.987 | .048 | .450 | 2.220 |
| | INCBS | -.036 | .108 | -.047 | -.333 | .739 | .127 | 7.860 |

a. Dependent Variable: FMBS

Collinearity Diagnostics^a

| Model | Dimen sion | Eigenvalue | Condition Index | Variance Proportions | | | |
|-------|------------|------------|-----------------|----------------------|--------------|----------------|-------|
| | | | | (Constant) | Budget Slack | Monthly Income | INCBS |
| 1 | 1 | 3.416 | 1.000 | .00 | .00 | .00 | .00 |
| | 2 | .441 | 2.783 | .03 | .03 | .04 | .03 |
| | 3 | .125 | 5.222 | .13 | .10 | .13 | .12 |
| | 4 | .018 | 13.755 | .83 | .86 | .83 | .84 |

a. Dependent Variable: FMBS

LOGISTICS RESULT

_____ (R)

/_/_/_//_/_/

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Statistics/Data Analysis StataCorp

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Special Edition College Station, Texas 77845 USA

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979-696-4600 stata@stata.com

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Notes:

1. Unicode is supported; see `help unicode_advice`.
2. Maximum number of variables is set to 5000; see `help set_maxvar`.
3. New update available; type `-update all-`

Checking for updates...

(contacting <http://www.stata.com>)

Update status

Last check for updates: 13 May 2022

New update available: 29 Jan 2018 (what's new)

Current update level: 05 May 2015 (what's new)

Comment

Stata 17 available

Find out more: stata.com/new-in-stata

New features:

Tables PyStata
Bayesian econometrics Jupyter Notebook with Stata
Interval-censored Cox model Faster Stata
Differences-in-differences (DID) Bayesian multilevel modeling
Bayesian VAR New functions for dates and times
Multivariate meta-analysis Leave-one-out meta-analysis
Treatment-effects lasso Galbraith plots
Panel-data multinomial logit Bayesian panel-data models
Zero-inflated ordered logit Nonparametric tests for trend
Bayesian IRF and FEVD analysis Lasso with clustered data
Bayesian dynamic forecasting BIC for lasso penalty selection
Do-file Editor enhancements Bayesian linear and nonlinear DSGEs
Intel Math Kernel Library (MKL) H2O integration
Stata on Apple Silicon Java integration
JDBC

and more

Possible actions

Install available updates (or type -update all-)

[Click to edit automatic update checking preferences](#)

```
.*(26 variables, 385 observations pasted into data editor)
```

```
. logit bs sc opt dbs6 dbs8 dbs9
```

```
Iteration 0: log likelihood = -258.27688
```

```
Iteration 1: log likelihood = -251.1271
```

```
Iteration 2: log likelihood = -251.11617
```

Iteration 3: log likelihood = -251.11617

Logistic regression Number of obs = 385

LR chi2(5) = 14.32

Prob > chi2 = 0.0137

Log likelihood = -251.11617 Pseudo R2 = 0.0277

| bs | Coef. | Std. Err. | z | P> z | [95% Conf. Interval] |
|-------|-----------|-----------|-------|-------|----------------------|
| sc | -.0615011 | .162658 | -0.38 | 0.705 | -.3803048 .2573027 |
| opt | .5605328 | .1675639 | 3.35 | 0.001 | .2321135 .8889521 |
| dbs6 | -.1328462 | .099536 | -1.33 | 0.182 | -.3279331 .0622407 |
| dbs8 | .0880613 | .0935277 | 0.94 | 0.346 | -.0952496 .2713723 |
| dbs9 | -.0604029 | .1086364 | -0.56 | 0.578 | -.2733263 .1525204 |
| _cons | -1.003882 | .7827202 | -1.28 | 0.200 | -2.537985 .5302213 |

. logistic bs sc opt dbs6 dbs8 dbs9

Logistic regression Number of obs = 385

LR chi2(5) = 14.32

Prob > chi2 = 0.0137

Log likelihood = -251.11617 Pseudo R2 = 0.0277

| bs | Odds Ratio | Std. Err. | z | P> z | [95% Conf. Interval] |
|------|------------|-----------|-------|-------|----------------------|
| sc | .9403519 | .1529557 | -0.38 | 0.705 | .683653 1.293437 |
| opt | 1.751606 | .2935059 | 3.35 | 0.001 | 1.261263 2.432579 |
| dbs6 | .8755997 | .0871537 | -1.33 | 0.182 | .7204112 1.064218 |

```

dbs8 | 1.092055 .1021374 0.94 0.346 .9091459 1.311763
dbs9 | .9413852 .1022687 -0.56 0.578 .7608445 1.164766
_cons | .3664541 .286831 -1.28 0.200 .0790255 1.699308

```

```
. estat classification
```

Logistic model for bs

```

----- True -----
Classified | D  ~D | Total
-----+-----+-----
+ | 204 123 | 327
- | 29  29 | 58
-----+-----+-----
Total | 233 152 | 385

```

Classified + if predicted $\Pr(D) \geq .5$

True D defined as bs != 0

```

-----
Sensitivity   Pr( +| D) 87.55%
Specificity   Pr( -|~D) 19.08%
Positive predictive value Pr( D| +) 62.39%
Negative predictive value Pr(~D| -) 50.00%

```

```

-----
False + rate for true ~D Pr( +|~D) 80.92%
False - rate for true D  Pr( -| D) 12.45%
False + rate for classified + Pr(~D| +) 37.61%
False - rate for classified - Pr( D| -) 50.00%

```

```

-----
Correctly classified   60.52%

```

. estat classification

Logistic model for bs

----- True -----
Classified | D ~D | Total
-----+-----+-----
+ | 204 123 | 327
- | 29 29 | 58
-----+-----+-----
Total | 233 152 | 385

Classified + if predicted $\Pr(D) \geq .5$

True D defined as $bs \neq 0$

Sensitivity $\Pr(+|D)$ 87.55%
Specificity $\Pr(-|\sim D)$ 19.08%
Positive predictive value $\Pr(D|+)$ 62.39%
Negative predictive value $\Pr(\sim D|-)$ 50.00%

False + rate for true $\sim D$ $\Pr(+|\sim D)$ 80.92%
False - rate for true D $\Pr(-|D)$ 12.45%
False + rate for classified + $\Pr(\sim D|+)$ 37.61%
False - rate for classified - $\Pr(D|-)$ 50.00%

Correctly classified 60.52%

. estat classification

Logistic model for bs

----- True -----

| Classified | D | ~D | Total |
|------------|-----|-----|-------|
| + | 204 | 123 | 327 |
| - | 29 | 29 | 58 |
| Total | 233 | 152 | 385 |

Classified + if predicted $\Pr(D) \geq .5$

True D defined as $bs \neq 0$

Sensitivity $\Pr(+|D)$ 87.55%

Specificity $\Pr(-|\sim D)$ 19.08%

Positive predictive value $\Pr(D|+)$ 62.39%

Negative predictive value $\Pr(\sim D|-)$ 50.00%

False + rate for true $\sim D$ $\Pr(+|\sim D)$ 80.92%

False - rate for true D $\Pr(-|D)$ 12.45%

False + rate for classified + $\Pr(\sim D|+)$ 37.61%

False - rate for classified - $\Pr(D|-)$ 50.00%

Correctly classified 60.52%

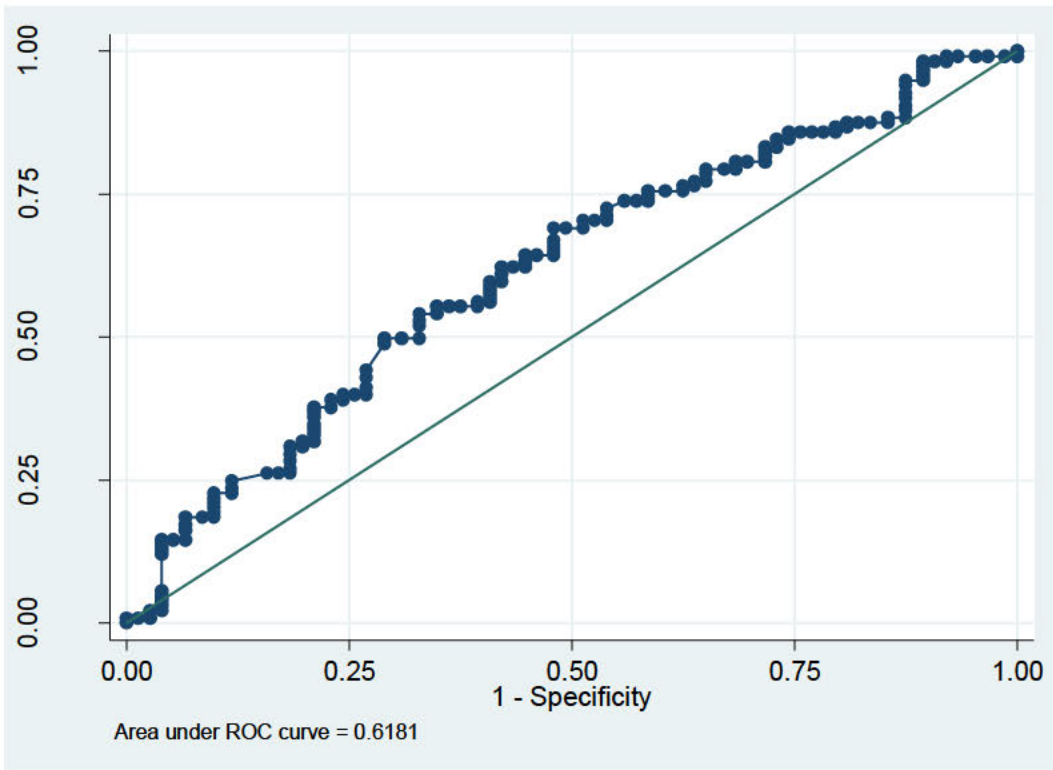
. lroc

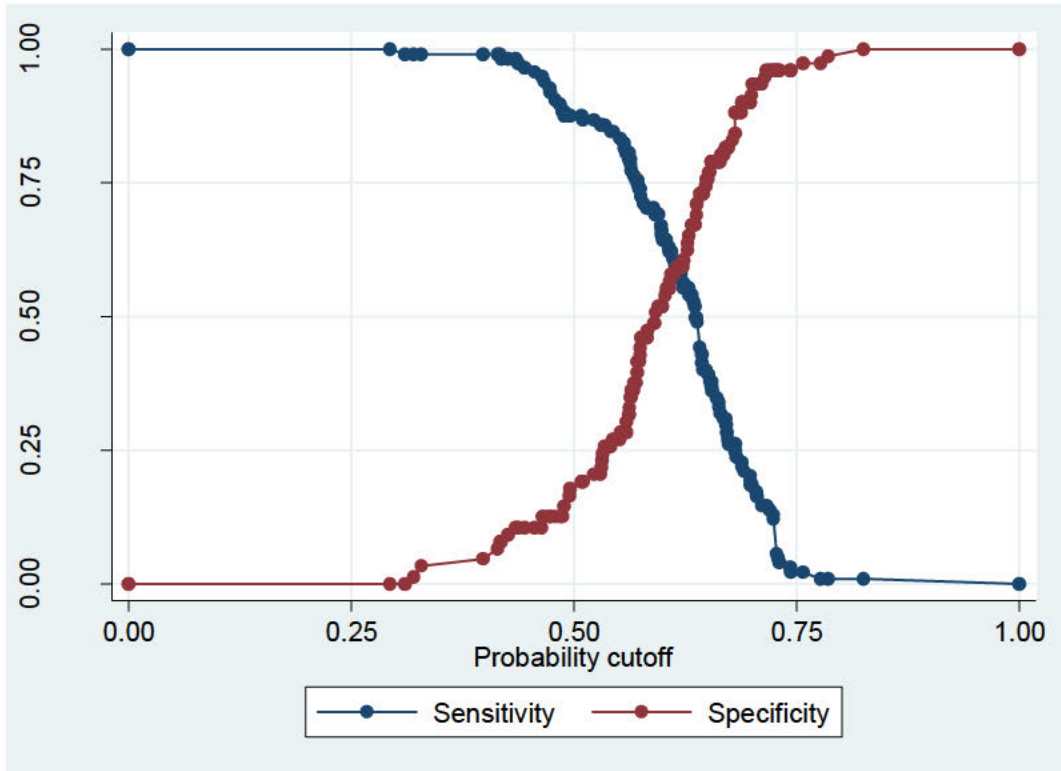
Logistic model for bs

number of observations = 385

area under ROC curve = 0.6181

. lsens





DETERMINANTS OF FMBS RESULTS

_____ (R)
 /_/_/_//_/_/
 ___//_//_//_// 14.0 Copyright 1985-2015 StataCorp LP
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Notes:

1. Unicode is supported; see help `unicode_advice`.
2. Maximum number of variables is set to 5000; see help `set_maxvar`.
3. New update available; type `-update all-`

Checking for updates...

(contacting <http://www.stata.com>)

Update status

Last check for updates: 12 Apr 2022

New update available: 29 Jan 2018 (what's new)

Current update level: 05 May 2015 (what's new)

Comment

Stata 17 available

Find out more: stata.com/new-in-stata

New features:

Tables PyStata

Bayesian econometrics Jupyter Notebook with Stata

Interval-censored Cox model Faster Stata

Differences-in-differences (DID) Bayesian multilevel modeling

Bayesian VAR New functions for dates and times

Multivariate meta-analysis Leave-one-out meta-analysis

Treatment-effects lasso Galbraith plots

Panel-data multinomial logit Bayesian panel-data models

Zero-inflated ordered logit Nonparametric tests for trend

Bayesian IRF and FEVD analysis Lasso with clustered data
Bayesian dynamic forecasting BIC for lasso penalty selection
Do-file Editor enhancements Bayesian linear and nonlinear DSGEs
Intel Math Kernel Library (MKL) H2O integration
Stata on Apple Silicon Java integration
JDBC

and more

Possible actions

Install available updates (or type -update all-)

Click to edit automatic update checking preferences

```
. use "C:\Users\DR LEKE\Documents\memory card\Stata14\omolayo2.dta", clear
```

```
. clear
```

```
. *(41 variables, 385 observations pasted into data editor)
```

```
. regress fmbs cms crms sis is scbms
```

```
fmbs ambiguous abbreviation
```

```
r(111);
```

```
.
```

```
. regress fmbs cms crms sis is scbms
```

```
fmbs ambiguous abbreviation
```

```
r(111);
```

```
.
```

```
. clear

.*(42 variables, 385 observations pasted into data editor)

. save "C:\Users\DR LEKE\Documents\memory card\Stata14\omolayo3.dta"
file C:\Users\DR LEKE\Documents\memory card\Stata14\omolayo3.dta saved

. regress fmbs dfmb1 dfmb2 dfmb3 fz income qualification
```

```
Source | SS   df MS   Number of obs = 385
-----+----- F(6, 378) = 4.21
Model | 24.0789265   6 4.01315442 Prob > F = 0.0004
Residual | 359.920972  378 .952171884 R-squared = 0.0627
-----+----- Adj R-squared = 0.0478
Total | 383.999899  384 .999999736 Root MSE = .97579

-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
dfmb1 | -.0196727 .0325487 -0.60 0.546 -.0836719 .0443264
dfmb2 | .0108824 .0335843  0.32 0.746 -.0551531 .0769179
dfmb3 | -.1070642 .0359779 -2.98 0.003 -.1778061 -.0363223
fz | -.0045105 .0736613 -0.06 0.951 -.1493478 .1403268
income | -.1580218 .0519094 -3.04 0.002 -.2600892 -.0559544
qualification | -.1170787 .0747647 -1.57 0.118 -.2640856 .0299282
_cons | .8695382 .2263137  3.84 0.000 .4245467  1.31453
-----
```

```
. predict r, residuals

. estat hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of fmbs

$\chi^2(1) = 2.17$

Prob > $\chi^2 = 0.1411$

```
. estat hettest iid
```

```
variable iid not found
```

```
r(111);
```

```
. estat hettest, iid
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of fmbs

$\chi^2(1) = 4.15$

Prob > $\chi^2 = 0.0416$

```
. estat hettest, fstat
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of fmbs

$F(1, 383) = 4.17$

Prob > $F = 0.0417$

```
. gen abse=abs(r)
```

```
. wls0 fmbs dfmb1 dfmb2 dfmb3 fz income qualification, wvar(dfmb1 dfmb2 dfmb3 fz income
qualification) type(abse) noconst graph
```

WLS regression - type: proportional to abs(e)

(sum of wgt is 1.5624e+03)

```
Source | SS   df MS   Number of obs = 385
-----+----- F(6, 378) = 20.05
Model | 68.9863823   6 11.4977304 Prob > F = 0.0000
Residual | 216.784379  378 .573503647 R-squared = 0.2414
-----+----- Adj R-squared = 0.2294
Total | 285.770761  384 .74419469 Root MSE = .7573
```

```
-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
dfmb1 | -.0385808 .0369011 -1.05 0.296  -.111138 .0339764
dfmb2 | -.0425275 .0283655 -1.50 0.135  -.0983014 .0132465
dfmb3 | -.1636082 .0362411 -4.51 0.000  -.2348675 -.0923488
fz | -.0014798 .0803601 -0.02 0.985  -.1594886 .1565289
income | -.1418258 .0576355 -2.46 0.014  -.2551521 -.0284994
qualification | -.0566726 .080088 -0.71 0.480  -.2141465 .1008012
_cons | 1.121102 .0964283 11.63 0.000  .931499 1.310705
-----
```

```
. wls0 fmbs dfmb1 dfmb2 dfmb3 fz income qualification, wvar(dfmb1 dfmb2 dfmb3 fz income
qualification) type(e2) noconst graph
```

WLS regression - type: proportional to e^2

(sum of wgt is 1.3132e+06)

```
Source | SS   df MS   Number of obs = 385
-----+----- F(6, 378) = 29.44
Model | .139859889   6 .023309981 Prob > F = 0.0000
Residual | .299317728 378 .000791846 R-squared = 0.3185
-----+----- Adj R-squared = 0.3076
Total | .439177617 384 .001143692 Root MSE = .02814
```

```
-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
dfmb1 | -.0382213 .0454511 -0.84 0.401  -.12759 .0511474
dfmb2 | -.2858226 .0248091 -11.52 0.000  -.3346037  -.2370416
dfmb3 | -.1201917 .0452649  -2.66 0.008  -.2091943  -.0311891
fz | .0255539 .0947055   0.27 0.787  -.1606617  .2117695
income | -.0940385 .0692587  -1.36 0.175  -.2302191  .0421421
qualification | -.0936078 .0961844  -0.97 0.331  -.2827314  .0955158
_cons | 1.75509 .1091093 16.09 0.000  1.540553 1.969627
-----
```

```
. wls0 fmbs dfmb1 dfmb2 dfmb3 fz income qualification, wvar(dfmb1 dfmb2 dfmb3 fz income
qualification) type(log2) noconst graph
```

WLS regression - type: proportional to $\log(e^2)$

(sum of wgt is 5.5856e+02)

```
Source | SS   df MS   Number of obs = 385
-----+----- F(6, 378) = 14.70
```

```

Model | 75.9366473 6 12.6561079 Prob > F = 0.0000
Residual | 325.509985 378 .861137526 R-squared = 0.1892
-----+----- Adj R-squared = 0.1763
Total | 401.446632 384 1.04543394 Root MSE = .92797

```

```

-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
dfmb1 | -.0491415 .0355153 -1.38 0.167 -.1189739 .0206909
dfmb2 | .0362061 .0345676 1.05 0.296 -.0317628 .1041751
dfmb3 | -.0958465 .0336882 -2.85 0.005 -.1620863 -.0296068
fz | .2694653 .0622507 4.33 0.000 .1470642 .3918664
income | -.3051322 .0513915 -5.94 0.000 -.4061812 -.2040832
qualification | -.196737 .0903923 -2.18 0.030 -.3744718 -.0190022
_cons | .809086 .157139 5.15 0.000 .5001098 1.118062
-----

```

```

. wls0 fmbs dfmb1 dfmb2 dfmb3 fz income qualification, wvar(dfmb1 dfmb2 dfmb3 fz income
qualification) type(xb2) noconst graph

```

WLS regression - type: proportional to xb^2

(sum of wgt is 4.1425e+05)

```

Source | SS df MS Number of obs = 385
-----+----- F(6, 378) = 62.64
Model | 102.774404 6 17.1290674 Prob > F = 0.0000
Residual | 103.362254 378 .273445116 R-squared = 0.6986
-----+----- Adj R-squared = 0.6906
Total | 206.136658 384 .536814214 Root MSE = .52292

```

| fmbs | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] |
|---------------|-----------|-----------|-------|-------|----------------------|
| dfmb1 | -.1680626 | .0420039 | -4.00 | 0.000 | -.2506532 -.085472 |
| dfmb2 | .2258617 | .0338269 | 6.68 | 0.000 | .1593493 .2923741 |
| dfmb3 | -.06727 | .0963254 | -0.70 | 0.485 | -.2566707 .1221308 |
| fz | -.4618663 | .0863109 | -5.35 | 0.000 | -.6315759 -.2921567 |
| income | -.7020268 | .1475796 | -4.76 | 0.000 | -.9922066 -.411847 |
| qualification | -.0546704 | .1316068 | -0.42 | 0.678 | -.3134435 .2041028 |
| _cons | 2.081332 | .777905 | 2.68 | 0.008 | .5517685 3.610895 |

.RELIABILITY TEST

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .779 | 6 |

Item Statistics

| | Mean | Std. Deviation | N |
|--------|--------|----------------|-----|
| FMBS | .0000 | 1.00000 | 385 |
| CMS1 | 3.3576 | .87068 | 385 |
| CRMS1 | 2.9851 | .83440 | 385 |
| SIS1 | 3.0925 | .77807 | 385 |
| IS1 | 2.9844 | .98853 | 385 |
| SCBMS1 | 2.8139 | .93091 | 385 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|--------|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| FMBS | 15.2334 | 8.097 | .385 | .647 |
| CMS1 | 11.8758 | 8.989 | .295 | .674 |
| CRMS1 | 12.2483 | 7.471 | .685 | .546 |
| SIS1 | 12.1409 | 9.350 | .280 | .675 |
| IS1 | 12.2490 | 8.079 | .397 | .643 |
| SCBMS1 | 12.4195 | 8.077 | .443 | .625 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 15.2334 | 11.290 | 3.36009 | 6 |

Stayed within budget regression result

ANOVA

| | Sum of Squares | df | Mean Square | F | Sig. |
|------------|----------------|-----|-------------|-------|------|
| Regression | 8.370 | 1 | 8.370 | 8.534 | .004 |
| Residual | 375.630 | 383 | .981 | | |
| Total | 384.000 | 384 | | | |

Coefficients

| | Unstandardised Coefficients | | Standardised Coefficients | | T | Sig. |
|------------|-----------------------------|------------|---------------------------|------------|--------|------|
| | B | Std. Error | Beta | Std. Error | | |
| (Constant) | -.426 | .154 | | | -2.761 | .006 |
| FMBS4 | .121 | .041 | .148 | .051 | 2.921 | .004 |

Paid of credit balance at month end regression

Coefficients

| | Unstandardised Coefficients | | Standardised Coefficients | | T | Sig. |
|------------|-----------------------------|------------|---------------------------|------------|--------|------|
| | B | Std. Error | Beta | Std. Error | | |
| (Constant) | -.244 | .156 | | | -1.566 | .118 |
| FMBS5 | .069 | .011 | .084 | .051 | 1.657 | .048 |

FMBS SUB SCALE WLS

_____ (R)
/ _ / _ // _ /
_ // _ // _ / 14.0 Copyright 1985-2015 StataCorp LP
Statistics/Data Analysis StataCorp
4905 Lakeway Drive
Special Edition College Station, Texas 77845 USA
800-STATA-PC <http://www.stata.com>
979-696-4600 stata@stata.com
979-696-4601 (fax)

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Serial number: 401406214261

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University of Cape Town

Notes:

1. Unicode is supported; see help `unicode_advice`.
2. Maximum number of variables is set to 5000; see help `set_maxvar`.

3. New update available; type -update all-

Checking for updates...

(contacting <http://www.stata.com>)

Update status

Last check for updates: 24 Mar 2022

New update available: 29 Jan 2018 (what's new)

Current update level: 05 May 2015 (what's new)

Comment

Stata 17 available

Find out more: stata.com/new-in-stata

New features:

Tables PyStata

Bayesian econometrics Jupyter Notebook with Stata

Interval-censored Cox model Faster Stata

Differences-in-differences (DID) Bayesian multilevel modeling

Bayesian VAR New functions for dates and times

Multivariate meta-analysis Leave-one-out meta-analysis

Treatment-effects lasso Galbraith plots

Panel-data multinomial logit Bayesian panel-data models

Zero-inflated ordered logit Nonparametric tests for trend

Bayesian IRF and FEVD analysis Lasso with clustered data

Bayesian dynamic forecasting BIC for lasso penalty selection

Do-file Editor enhancements Bayesian linear and nonlinear DSGEs

Intel Math Kernel Library (MKL) H2O integration

Stata on Apple Silicon Java integration
JDBC

and more

Possible actions

Install available updates (or type -update all-)

Click to edit automatic update checking preferences

```
. *(6 variables, 385 observations pasted into data editor)
```

```
. save "C:\Users\DR LEKE\Documents\memory card\Stata14\omolayo2.dta"  
file C:\Users\DR LEKE\Documents\memory card\Stata14\omolayo2.dta saved
```

```
. graph twoway (scatter fmbs cms crms sis is scbms) (lfit fmbs cms crms sis is  
> scbms)
```

```
too many variables specified: fmbs cms crms sis is scbms r(103);
```

```
. regress fmbs cms crms sis is scbms
```

```
Source | SS   df MS   Number of obs = 385  
-----+----- F(5, 379) = 54.52  
Model | 160.650997   5 32.1301994 Prob > F = 0.0000  
Residual | 223.348902  379 .589311086 R-squared = 0.4184  
-----+----- Adj R-squared = 0.4107  
Total | 383.999899  384 .999999736 Root MSE = .76767
```

```
-----  
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
```

```

-----+-----
cms | -.2161155 .0500042 -4.32 0.000  -.314436 -.1177951
crms | .9017068 .0610731 14.76 0.000  .7816223 1.021791
sis | .0016575 .0535807  0.03 0.975  -.1036952 .1070102
is | .0643276 .0438699  1.47 0.143  -.0219313 .1505864
scbms | -.1603399 .0520994 -3.08 0.002  -.26278 -.0578997
_cons | -1.711962 .223817 -7.65 0.000 -2.152041 -1.271884
-----

```

```
. predict r, residuals
```

```
. estat hettest
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of fmbs

chi2(1) = 9.82

Prob > chi2 = 0.0017

```
. estat hettest iid
```

```
variable iid not found
```

```
r(111);
```

```
. estat hettest, iid
```

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of fmbs

chi2(1) = 11.31

Prob > chi2 = 0.0008

. estat hettest, fstat

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of fmbs

F(1 , 383) = 11.59

Prob > F = 0.0007

. gen abse=abs(r)

. regress abse cma crms sis is scbms, noconst

variable cma not found

r(111);

. regress abse cms crms sis is scbms, noconst

| | | | | | |
|------------------------------------|------------|-----|------------|-----------------|--------|
| Source | SS | df | MS | Number of obs = | 385 |
| -----+----- F(5, 380) = 130.19 | | | | | |
| Model | 141.024293 | 5 | 28.2048585 | Prob > F = | 0.0000 |
| Residual | 82.3246102 | 380 | .216643711 | R-squared = | 0.6314 |
| -----+----- Adj R-squared = 0.6266 | | | | | |
| Total | 223.348903 | 385 | .58012702 | Root MSE = | .46545 |

| abse | Coef. | Std. Err. | t | P> t | [95% Conf. Interval] |
|-------------|-----------|-----------|-------|-------|----------------------|
| -----+----- | | | | | |
| cms | .0725045 | .027851 | 2.60 | 0.010 | .0177431 .1272658 |
| crms | -.1237335 | .0366009 | -3.38 | 0.001 | -.1956993 -.0517678 |

```

sis | .0732647 .0289203 2.53 0.012 .0164009 .1301284
is | .062304 .02632 2.37 0.018 .0105529 .114055
scbms | .1066834 .0309831 3.44 0.001 .0457635 .1676033

```

```
. predict fit, xb
```

```
. gen weight=1/fit^2
```

```
. regress fmbs cms crms sis is scbms (aweight=weight)
```

```
variable aweight not found
```

```
r(111);
```

```
. regress fmbs cms crms sis is scbms, (aweight=weight)
```

```
option ( not allowed
```

```
r(198);
```

```
. gen aweight=weight
```

```
. regress fmbs cms crms sis is scbms (aweight)
```

```
equation/system not identified
```

```
r(481);
```

```
. regress fmbs cms crms sis is scbms aweight
```

```

Source | SS   df MS   Number of obs = 385
-----+----- F(6, 378) = 45.59
Model | 161.222805   6 26.8704675 Prob > F = 0.0000
Residual | 222.777094  378 .589357391 R-squared = 0.4199
-----+----- Adj R-squared = 0.4106
Total | 383.999899  384 .999999736 Root MSE = .7677

```

```

-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
cms | -.2030447 .0517369 -3.92 0.000 -.3047729 -.1013164
crms | .8716588 .0682701 12.77 0.000 .737422 1.005896
sis | .0233989 .057951 0.40 0.687 -.0905478 .1373455
is | .0760806 .0454653 1.67 0.095 -.013316 .1654771
scbms | -.1357067 .0577925 -2.35 0.019 -.2493419 -.0220715
aweight | .0111561 .011326 0.98 0.325 -.0111138 .033426
_cons | -1.881494 .2823492 -6.66 0.000 -2.436666 -1.326322
-----

```

```
. findit wls0
```

```
. wls0 fmbs cms crms sis is scbms, wvar(cms crms sis is scbms) type(abse) nocon
> st graph
```

WLS regression - type: proportional to abs(e)

(sum of wgt is 1.5087e+03)

```

Source | SS   df MS   Number of obs = 385
-----+----- F(5, 379) = 81.50
Model | 197.540439   5 39.5080878 Prob > F = 0.0000
Residual | 183.725448  379 .484763714 R-squared = 0.5181
-----+----- Adj R-squared = 0.5118
Total | 381.265887  384 .992879913 Root MSE = .69625

```

```

-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----

```

```

-----+-----
cms | -.2269425 .0457979 -4.96 0.000 -.3169924 -.1368927
crms | .983274 .0522728 18.81 0.000 .8804929 1.086055
sis | -.0006597 .0421814 -0.02 0.988 -.0835987 .0822792
is | .0381729 .0403736 0.95 0.345 -.0412113 .1175572
scbms | -.2257483 .0479985 -4.70 0.000 -.3201251 -.1313716
_cons | -1.656774 .1844201 -8.98 0.000 -2.019389 -1.29416
-----+-----

```

```

. wls0 fmbs cms crms sis is scbms, wvar(cms crms sis is scbms) type(e2) noconst
> graph

```

WLS regression - type: proportional to e^2

(sum of wgt is 3.4122e+03)

```

Source | SS   df MS   Number of obs = 385
-----+----- F(5, 379) = 106.40
Model | 151.88062   5 30.3761239 Prob > F = 0.0000
Residual | 108.197456 379 .285481414 R-squared = 0.7840
-----+----- Adj R-squared = 0.7785
Total | 260.078076 384 .677286655 Root MSE = .5343

```

```

-----+-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
cms | .1571282 .0411996 -3.81 0.000 -.2381367 -.0761198
crms | .986761 .0445944 22.13 0.000 .8990776 1.074444
sis | .0056839 .0009026 -0.20 0.045 -.0627573 .0513895
is | -.03959 .0336789 -1.18 0.241 -.1058109 .0266309
scbms | .2085738 .0424056 -4.92 0.000 -.2919535 -.1251941

```

_cons | -1.713562 .1689324 -10.14 0.000 -2.045724 -1.3814

```
. wls0 fmbs cms crms sis is scbms, wvar(cms crms sis is scbms) type(log2) noco  
> nst graph
```

WLS regression - type: proportional to $\log(e^2)$

(sum of wgt is 1.9054e+02)

```
Source | SS   df MS   Number of obs = 385  
-----+----- F(5, 379) = 70.23  
Model | 197.289544   5 39.4579088 Prob > F = 0.0000  
Residual | 212.937751 379 .56184103 R-squared = 0.4809  
-----+----- Adj R-squared = 0.4741  
Total | 410.227295 384 1.06830025 Root MSE = .74956
```

```
-----  
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]  
-----+-----  
cms | -.1102843 .0511062 -2.16 0.032 -.2107714 -.0097971  
crms | .8022717 .0496977 16.14 0.000 .7045541 .8999894  
sis | .0617629 .0565231 1.09 0.275 -.0493753 .1729011  
is | .1516368 .0490058 3.09 0.002 .0552795 .2479942  
scbms | -.1902181 .0523208 -3.64 0.000 -.2930935 -.0873428  
_cons | -2.134617 .2028169 -10.52 0.000 -2.533404 -1.73583  
-----
```

```
. wls0 fmbs cms crms sis is scbms, wvar(cms crms sis is scbms) type(xb2) nocons  
> t graph
```

WLS regression - type: proportional to xb^2

(sum of wgt is 4.7338e+06)

```
Source | SS   df MS   Number of obs = 385
-----+----- F(5, 379) = 24.58
Model | 16.0652658   5 3.21305315 Prob > F = 0.0000
Residual | 49.5330639 379 .1306941 R-squared = 0.2449
-----+----- Adj R-squared = 0.2349
Total | 65.5983296 384 .170828983 Root MSE = .36152
```

```
-----
fmbs | Coef. Std. Err. t P>|t| [95% Conf. Interval]
-----+-----
cms | .0912945 .6235536 0.15 0.884 -1.134763 1.317352
crms | .6633243 2.039564 0.33 0.745 -3.346953 4.673602
sis | -.3539884 .0430809 -8.22 0.000 -.4386959 -.269281
is | .1233997 .2424327 0.51 0.611 -.3532819 .6000813
scbms | -.1784448 .4481078 -0.40 0.691 -1.059534 .7026439
_cons | -1.534103 5.602881 -0.27 0.784 -12.55073 9.482523
-----
```

```
. wls0 fmbs cms fmbs crms sis is scbms, wvar(cms crms sis is scbms) type(e2) no
> const graph
```

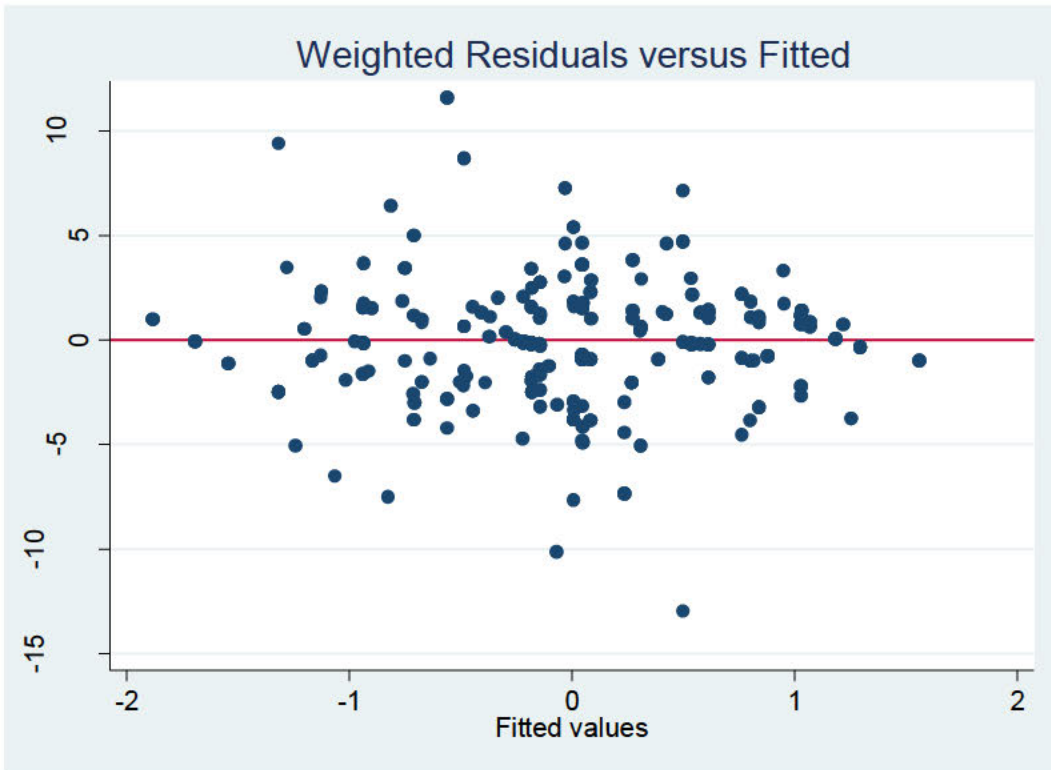
WLS regression - type: proportional to e^2

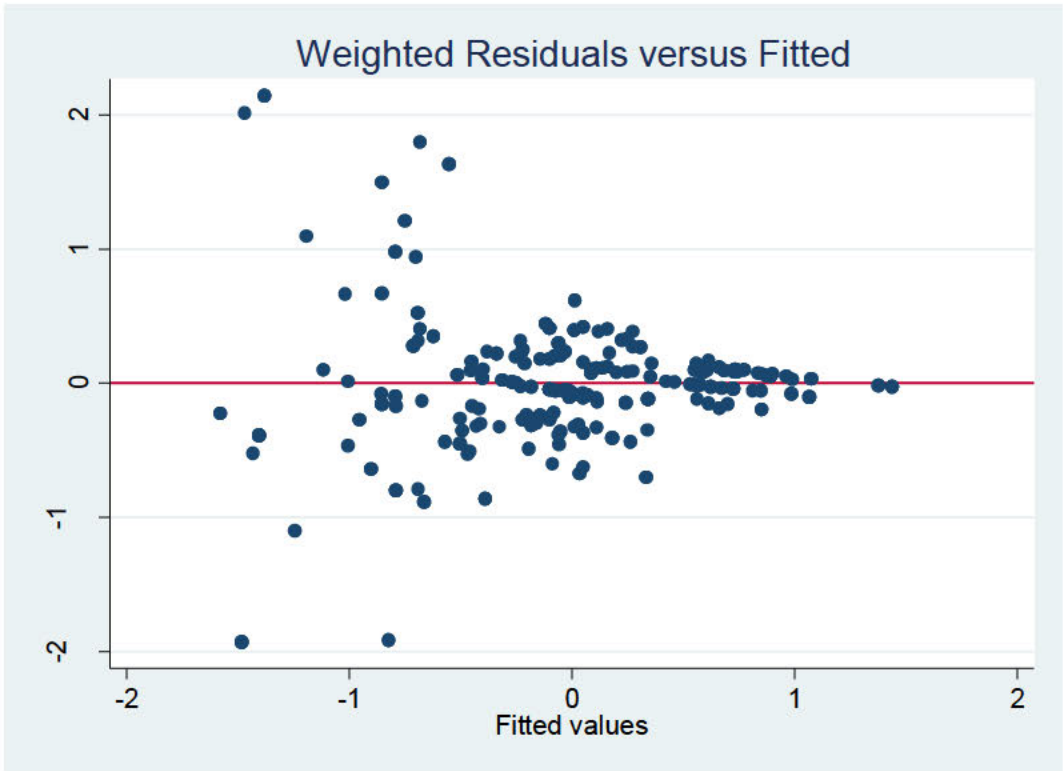
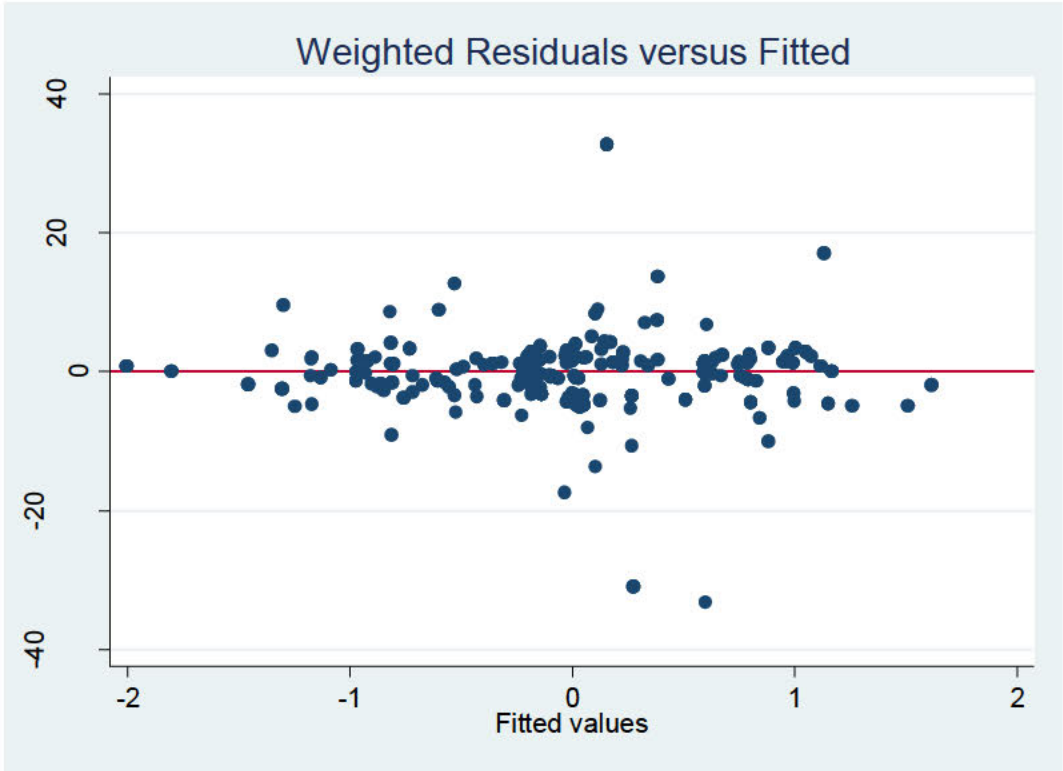
no observations

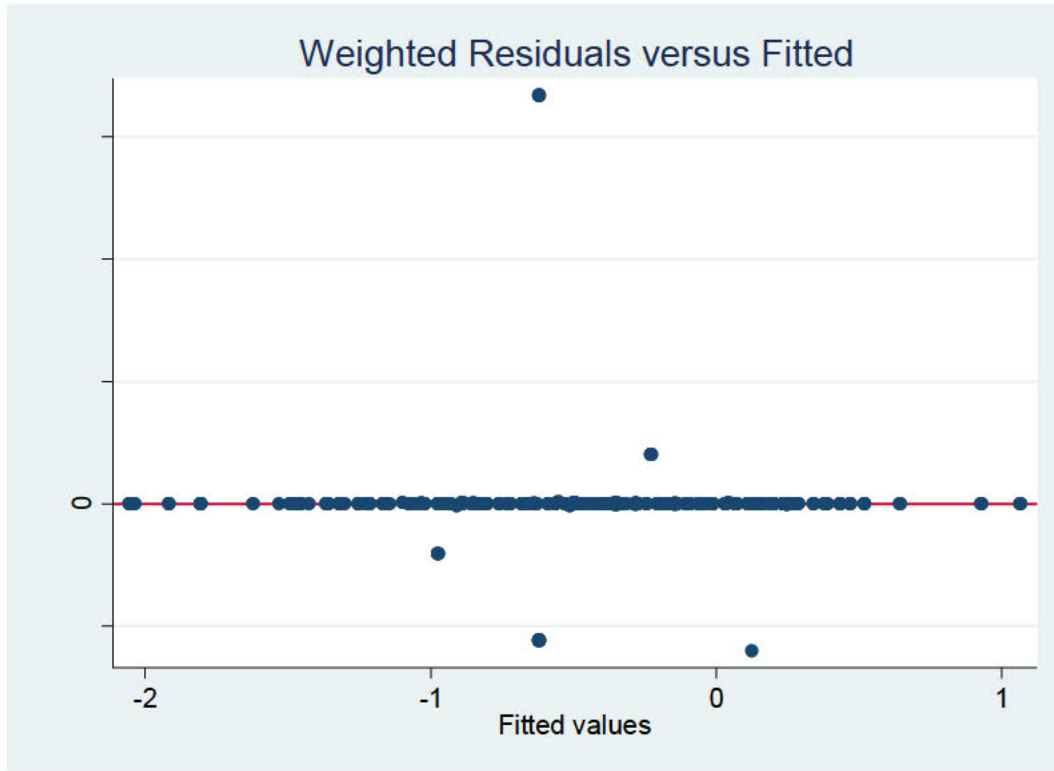
r(2000);

```
. wls0 fmbs cms crms sis is scbms, wvar(cms crms sis is scbms) type(e2) noconst
```

```
> graph  
variable _wls_wgt already defined  
r(110);
```







FMBS SCALE

| Statistics | | | | | | |
|----------------|---------|--------|-----------|--------|--------|------------|
| | | CMS1 | CRMS 1 | SIS1 | IS1 | SCBMS 1 |
| N | Valid | 385 | 385 | 385 | 385 | 385 |
| | Missing | 0 | 0 | 0 | 0 | 0 |
| Mean | | 3.3532 | 2.9688 | 3.0779 | 2.8130 | 2.9766 |
| Median | | 3.0000 | 3.0000 | 3.0000 | 3.0000 | 3.0000 |
| Std. Deviation | | .87791 | .84722 | .77672 | .93058 | .99319 |
| Minimum | | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Maximum | | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |

CMS1

| | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|-------------|-----------|----------|----------------|---------------------|
| Valid Never | 6 | 1.6 | 1.6 | 1.6 |
| Seldom | 61 | 15.8 | 15.8 | 17.4 |
| Sometimes | 134 | 34.8 | 34.8 | 52.2 |
| Often | 159 | 41.3 | 41.3 | 93.5 |
| Always | 25 | 6.5 | 6.5 | 100.0 |
| Total | 385 | 100.0 | 100.0 | |

CRMS1

| | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|-------------|-----------|----------|----------------|---------------------|
| Valid Never | 20 | 5.2 | 5.2 | 5.2 |
| Seldom | 76 | 19.7 | 19.7 | 24.9 |
| Sometimes | 193 | 50.1 | 50.1 | 75.1 |
| Often | 88 | 22.9 | 22.9 | 97.9 |
| Always | 8 | 2.1 | 2.1 | 100.0 |
| Total | 385 | 100.0 | 100.0 | |

SIS1

| | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|-------------|-----------|----------|----------------|---------------------|
| Valid Never | 10 | 2.6 | 2.6 | 2.6 |
| Seldom | 64 | 16.6 | 16.6 | 19.2 |
| Sometimes | 205 | 53.2 | 53.2 | 72.5 |
| Often | 98 | 25.5 | 25.5 | 97.9 |
| Always | 8 | 2.1 | 2.1 | 100.0 |
| Total | 385 | 100.0 | 100.0 | |

IS1

| | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|-------------|-----------|----------|----------------|---------------------|
| Valid Never | 38 | 9.9 | 9.9 | 9.9 |
| Seldom | 91 | 23.6 | 23.6 | 33.5 |
| Sometimes | 165 | 42.9 | 42.9 | 76.4 |
| Often | 87 | 22.6 | 22.6 | 99.0 |
| Always | 4 | 1.0 | 1.0 | 100.0 |
| Total | 385 | 100.0 | 100.0 | |

SCBMS1

| | Frequency | Per cent | Valid Per cent | Cumulative Per cent |
|-------------|-----------|----------|----------------|---------------------|
| Valid Never | 38 | 9.9 | 9.9 | 9.9 |
| Seldom | 66 | 17.1 | 17.1 | 27.0 |
| Sometimes | 162 | 42.1 | 42.1 | 69.1 |
| Often | 105 | 27.3 | 27.3 | 96.4 |
| Always | 14 | 3.6 | 3.6 | 100.0 |
| Total | 385 | 100.0 | 100.0 | |

Variables Entered/Removed^b

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|---------|
| 1 | SCBMS1, CMS1, SIS1, IS1, CRMS1 ^a | | . Enter |

a. All requested variables entered.

b. Dependent Variable: FMBS

Model Summary^b

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate | Change Statistics | | | |
|-------|-------------------|----------|-------------------|----------------------------|-------------------|----------|-----|-----|
| | | | | | R Square Change | F Change | df1 | df2 |
| 1 | .649 ^a | .421 | .414 | .76572 | .421 | 55.184 | 5 | 37 |

a. Predictors: (Constant), SCBMS1, CMS1, SIS1, IS1, CRMS1

b. Dependent Variable: FMBS

ANOVA^b

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|-----|-------------|--------|-------------------|
| 1 | Regression | 161.780 | 5 | 32.356 | 55.184 | .000 ^a |
| | Residual | 222.220 | 379 | .586 | | |
| | Total | 384.000 | 384 | | | |

a. Predictors: (Constant), SCBMS1, CMS1, SIS1, IS1, CRMS1

b. Dependent Variable: FMBS

Coefficients^a

| Model | | Unstandardised Coefficients | | Standardised Coefficients | t | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|--------|------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -1.701 | .221 | | -7.696 | .000 |
| | CMS1 | -.210 | .049 | -.185 | -4.254 | .000 |
| | CRMS1 | .894 | .060 | .758 | 14.838 | .000 |
| | SIS1 | .011 | .054 | .009 | .205 | .838 |
| | IS1 | .070 | .044 | .069 | 1.596 | .111 |
| | SCBMS1 | -.174 | .053 | -.162 | -3.316 | .001 |

a. Dependent Variable: FMBS

Residuals Statistics^a

| | Minimum | Maximum | Mean | Std. Deviation | N |
|-------------------------|----------|---------|--------|-------------------|-----|
| Predicted Value | -1.6378 | 1.4855 | .0000 | .64908 | 385 |
| Residual | -2.09506 | 1.84673 | .00000 | .76072 | 385 |
| Std. Predicted Value | -2.523 | 2.289 | .000 | 1.000 | 385 |
| Std. Residual | -2.736 | 2.412 | .000 | .993 | 385 |

a. Dependent Variable: FMBS

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|--|
| Output Created | | 14-Mar-2022 05:29:37 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS2 FMBS3 FMBS4 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.004 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .032 | .037 | 3 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Paid all your bills on time | 3.9299 | 1.13778 | 385 |
| Kept a written or electronic record of your monthly expenses | 3.4338 | 1.28752 | 385 |
| Stayed within your budget or spending plan | 3.5273 | 1.22258 | 385 |

Inter-Item Correlation Matrix

| | Paid all your bills on time | Kept a written or electronic record of your monthly expenses | Stayed within your budget or spending plan |
|--|-----------------------------|--|--|
| Paid all your bills on time | 1.000 | -.105 | .122 |
| Kept a written or electronic record of your monthly expenses | -.105 | 1.000 | .021 |
| Stayed within your budget or spending plan | .122 | .021 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Paid all your bills on time | 6.9610 | 3.220 | .008 | .027 | .042 |
| Kept a written or electronic record of your monthly expenses | 7.4571 | 3.129 | -.053 | .012 | .217 |
| Stayed within your budget or spending plan | 7.3636 | 2.643 | .102 | .016 | -.234 ^a |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 10.8909 | 4.545 | 2.13198 | 3 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|--|
| Output Created | | 14-Mar-2022 05:30:48 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS2 FMBS3 FMBS4 FMBS1 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.008 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .125 | .135 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Paid all your bills on time | 3.9299 | 1.13778 | 385 |
| Kept a written or electronic record of your monthly expenses | 3.4338 | 1.28752 | 385 |
| Stayed within your budget or spending plan | 3.5273 | 1.22258 | 385 |
| Comparison shopped when purchasing a product or service | 3.5351 | 1.08467 | 385 |

Inter-Item Correlation Matrix

| | Paid all your bills on time | Kept a written or electronic record of your monthly expenses | Stayed within your budget or spending plan | Comparison shopped when purchasing a product or service |
|--|-----------------------------|--|--|---|
| Paid all your bills on time | 1.000 | -.105 | .122 | .071 |
| Kept a written or electronic record of your monthly expenses | -.105 | 1.000 | .021 | .003 |
| Stayed within your budget or spending plan | .122 | .021 | 1.000 | .113 |
| Comparison shopped when purchasing a product or service | .071 | .003 | .113 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Paid all your bills on time | 10.4961 | 4.704 | .042 | .030 | .120 |
| Kept a written or electronic record of your monthly expenses | 10.9922 | 4.779 | -.041 | .012 | .255 |
| Stayed within your budget or spending plan | 10.8987 | 4.003 | .144 | .027 | -.047 ^a |
| Comparison shopped when purchasing a product or service | 10.8909 | 4.545 | .104 | .016 | .032 |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 14.4260 | 6.203 | 2.49068 | 4 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|---|
| Output Created | | 14-Mar-2022 05:33:28 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS2 FMBS4 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.005 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .217 | .218 | 2 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Paid all your bills on time | 3.9299 | 1.13778 | 385 |
| Stayed within your budget or spending plan | 3.5273 | 1.22258 | 385 |

Inter-Item Correlation Matrix

| | | |
|--|-----------------------------|--|
| | Paid all your bills on time | Stayed within your budget or spending plan |
| Paid all your bills on time | 1.000 | .122 |
| Stayed within your budget or spending plan | .122 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Paid all your bills on time | 3.5273 | 1.495 | .122 | .015 | .a |
| Stayed within your budget or spending plan | 3.9299 | 1.295 | .122 | .015 | .a |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|--------|----------|----------------|------------|
| 7.4571 | 3.129 | 1.76890 | 2 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|--|
| Output Created | | 14-Mar-2022 05:39:27 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS2 FMBS4 FMBS5 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.000 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .694 | .691 | 3 |

Item Statistics

| | Mean | Std. Deviation | N |
|---|--------|----------------|-----|
| Paid all your bills on time | 3.9299 | 1.13778 | 385 |
| Stayed within your budget or spending plan | 3.5273 | 1.22258 | 385 |
| Paid off credit card balance in full each month | 3.5558 | 1.23010 | 385 |

Inter-Item Correlation Matrix

| | Paid all your bills on time | Stayed within your budget or spending plan | Paid off credit card balance in full each month |
|---|-----------------------------|--|---|
| Paid all your bills on time | 1.000 | .622 | .554 |
| Stayed within your budget or spending plan | .622 | 1.000 | .653 |
| Paid off credit card balance in full each month | .554 | .653 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Paid all your bills on time | 7.0831 | 3.769 | .175 | .031 | .404 |
| Stayed within your budget or spending plan | 7.4857 | 3.240 | .250 | .071 | .267 |
| Paid off credit card balance in full each month | 7.4571 | 3.129 | .274 | .080 | .217 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 11.0130 | 5.836 | 2.41573 | 3 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|--|
| Output Created | | 14-Mar-2022 05:45:50 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS3 FMBS6 FMBS7 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.000 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .364 | .361 | 3 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Kept a written or electronic record of your monthly expenses | 3.4338 | 1.28752 | 385 |
| Maxed out the limit on one or more credit cards | 3.3377 | 1.34832 | 385 |
| Made only minimum payments on a loan | 3.3143 | 1.27370 | 385 |

Inter-Item Correlation Matrix

| | Kept a written or electronic record of your monthly expenses | Maxed out the limit on one or more credit cards | Made only minimum payments on a loan |
|--|--|---|--------------------------------------|
| Kept a written or electronic record of your monthly expenses | 1.000 | .319 | .071 |
| Maxed out the limit on one or more credit cards | .319 | 1.000 | .085 |
| Made only minimum payments on a loan | .071 | .085 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Kept a written or electronic record of your monthly expenses | 6.6519 | 3.733 | .269 | .104 | .157 |
| Maxed out the limit on one or more credit cards | 6.7481 | 3.512 | .277 | .106 | .132 |
| Made only minimum payments on a loan | 6.7714 | 4.583 | .096 | .009 | .483 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 10.0857 | 6.730 | 2.59415 | 3 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|---|
| Output Created | | 14-Mar-2022 05:46:14 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS3 FMBS6 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.063 |
| | Elapsed Time | 00:00:00.032 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .483 | .484 | 2 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Kept a written or electronic record of your monthly expenses | 3.4338 | 1.28752 | 385 |
| Maxed out the limit on one or more credit cards | 3.3377 | 1.34832 | 385 |

Inter-Item Correlation Matrix

| | | |
|--|--|---|
| | Kept a written or electronic record of your monthly expenses | Maxed out the limit on one or more credit cards |
| Kept a written or electronic record of your monthly expenses | 1.000 | .319 |
| Maxed out the limit on one or more credit cards | .319 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Kept a written or electronic record of your monthly expenses | 3.3377 | 1.818 | .319 | .102 | .a |
| Maxed out the limit on one or more credit cards | 3.4338 | 1.658 | .319 | .102 | .a |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|--------|----------|----------------|------------|
| 6.7714 | 4.583 | 2.14080 | 2 |

Reliability

GET

FILE='C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav'.

```
DATASET NAME DataSet0 WINDOW=FRONT.  
RELIABILITY  
/VARIABLES=FMBS3 FMBS6 FMBS5 FMBS18  
/SCALE('ALL VARIABLES') ALL  
/MODEL=ALPHA  
/STATISTICS=DESCRIPTIVE SCALE CORR COV  
/SUMMARY=TOTAL.
```

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|---|
| Output Created | | 17-Mar-2022 06:48:02 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS3 FMBS6 FMBS5 FMBS18 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR COV /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.016 |
| | Elapsed Time | 00:00:00.032 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .779 | .778 | 4 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Kept a written or electronic record of your monthly expenses | 3.4338 | 1.28752 | 385 |
| Maxed out the limit on one or more credit cards | 3.3377 | 1.34832 | 385 |
| Paid off credit card balance in full each month | 3.5558 | 1.23010 | 385 |
| Saved money and even borrow to finance socio cultural events | 3.0234 | 1.38330 | 385 |

Inter-Item Correlation Matrix

| | Kept a written or electronic record of your monthly expenses | Maxed out the limit on one or more credit cards | Paid off credit card balance in full each month | Saved money and even borrow to finance socio cultural events |
|--|--|---|---|--|
| Kept a written or electronic record of your monthly expenses | 1.000 | .619 | .632 | .509 |
| Maxed out the limit on one or more credit cards | .619 | 1.000 | .584 | .194 |
| Paid off credit card balance in full each month | .632 | .584 | 1.000 | -.021 |
| Saved money and even borrow to finance socio cultural events | .509 | .194 | -.021 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|-------------------------------|--------------------------------------|--|------------------------------------|--|
| Kept a written or electronic record of your monthly expenses | 9.9169 | 6.175 | .460 | .212 | .226 |
| Maxed out the limit on one or more credit cards | 10.0130 | 6.846 | .299 | .112 | .386 |
| Paid off credit card balance in full each month | 9.7948 | 8.320 | .133 | .064 | .528 |
| Saved money and even borrow to finance socio cultural events | 10.3273 | 7.111 | .237 | .115 | .448 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|-------------------|------------|
| 13.3506 | 10.775 | 3.28255 | 4 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|---|
| Output Created | | 14-Mar-2022 05:54:42 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS8 FMBS9 FMBS10 FMBS11 FMBS12 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.000 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .795 | .795 | 5 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Began or maintained an emergency savings fund | 3.3584 | 1.25472 | 385 |
| Saved money from every paycheck | 3.3870 | 1.24722 | 385 |
| Saved for a long term goal such as a car, education, home, etc.. | 3.6208 | 1.24021 | 385 |
| Contributed money to a retirement account | 3.7299 | 1.26234 | 385 |
| Bought bonds, stocks, or mutual funds | 3.2571 | 1.30658 | 385 |

Inter-Item Correlation Matrix

| | Began or maintained an emergency savings fund | Saved money from every paycheck | Saved for a long term goal such as a car, education,home, etc..5 | Contributed money to a retirement account | Bought bonds, stocks, or mutual funds |
|---|---|---------------------------------|--|---|---------------------------------------|
| Began or maintained an emergency savings fund | 1.000 | .502 | .430 | .562 | .674 |
| Saved money from every paycheck | .502 | 1.000 | .525 | .128 | .667 |
| Saved for a long term goal such as a car, education,home, etc.. | .430 | .25 | 1.000 | .674 | .234 |
| Contributed money to a retirement account | .562 | .128 | .674 | 1.000 | .445 |
| Bought bonds, stocks, or mutual funds | .674 | .667 | .234 | .445 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Began or maintained an emergency savings fund | 13.9948 | 9.182 | .320 | .105 | .405 |
| Saved money from every paycheck | 13.9662 | 9.663 | .254 | .070 | .448 |
| Saved for a long term goal such as a car, education,home, etc.. | 13.7325 | 9.243 | .319 | .112 | .406 |
| Contributed money to a retirement account | 13.6234 | 9.985 | .202 | .054 | .482 |
| Bought bonds, stocks, or mutual funds | 14.0961 | 9.457 | .252 | .085 | .451 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|-------------------|------------|
| 17.3532 | 13.187 | 3.63144 | 5 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|---|
| Output Created | | 14-Mar-2022 05:59:28 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS13 FMBS15 FMBS14 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.000 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .735 | .735 | 3 |

Item Statistics

| | Mean | Std. Deviation | N |
|---|--------|----------------|-----|
| Maintained or purchased an adequate health insurance policy | 3.2494 | 1.34442 | 385 |
| Maintained or purchased adequate life insurance | 3.3169 | 1.33204 | 385 |
| Maintained or purchased adequate property insurance like auto or homeowners insurance | 3.3117 | 1.34300 | 385 |

Inter-Item Correlation Matrix

| | Maintained or purchased an adequate health insurance policy | Maintained or purchased adequate life insurance | Maintained or purchased adequate property insurance like auto or homeowners insurance |
|---|---|---|---|
| Maintained or purchased an adequate health insurance policy | 1.000 | .579 | .614 |
| Maintained or purchased adequate life insurance | .579 | 1.000 | .609 |
| Maintained or purchased adequate property insurance like auto or homeowners insurance | .614 | .609 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|-------------------------------|--------------------------------------|--|------------------------------------|--|
| Maintained or purchased an adequate health insurance policy | 6.6286 | 5.041 | .413 | .186 | .581 |
| Maintained or purchased adequate life insurance | 6.5610 | 5.106 | .409 | .182 | .586 |
| Maintained or purchased adequate property insurance like auto or homeowners insurance | 6.5662 | 4.580 | .515 | .265 | .436 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|--------|----------|-------------------|------------|
| 9.8779 | 9.342 | 3.05644 | 3 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|---|
| Output Created | | 14-Mar-2022 06:03:53 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS16 FMBS17 FMBS18 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.000 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .702 | .697 | 3 |

Item Statistics

| | Mean | Std. Deviation | N |
|---|--------|----------------|-----|
| I usually have a separate budget for religion activities e.g Tithe and offering | 3.5091 | 1.21644 | 385 |
| There is often a separate budget for social events | 3.0390 | 1.27109 | 385 |
| Saved money and even borrow to finance socio cultural events | 3.0234 | 1.38330 | 385 |

Inter-Item Correlation Matrix

| | I usually have a separate budget for religion activities e.g Tithe and offering | There is often a separate budget for social events | Saved money and even borrow to finance socio cultural events |
|---|---|--|--|
| I usually have a separate budget for religion activities e.g Tithe and offering | 1.000 | .544 | .586 |
| There is often a separate budget for social events | .544 | 1.000 | .613 |
| Saved money and even borrow to finance socio cultural events | .586 | .613 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| I usually have a separate budget for religion activities e.g Tithe and offering | 6.0623 | 4.980 | .197 | .040 | .583 |
| There is often a separate budget for social events | 6.5325 | 4.020 | .372 | .175 | .312 |
| Saved money and even borrow to finance socio cultural events | 6.5481 | 3.540 | .399 | .187 | .251 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|--------|----------|-------------------|------------|
| 9.5714 | 7.532 | 2.74445 | 3 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|--|
| Output Created | | 14-Mar-2022 06:18:34 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS12 FMBS10 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.063 |
| | Elapsed Time | 00:00:00.125 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|----------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .379 | .379 | 2 |

Item Statistics

| | Mean | Std. Deviation | N |
|---|--------|----------------|-----|
| Bought bonds, stocks, or mutual funds | 3.2571 | 1.30658 | 385 |
| Saved for a long-term goal such as a car, education, home, etc. | 3.6208 | 1.24021 | 385 |

Inter-Item Correlation Matrix

| | | |
|---|---------------------------------------|---|
| | Bought bonds, stocks, or mutual funds | Saved for a long-term goal such as a car, education, home, etc. |
| Bought bonds, stocks, or mutual funds | 1.000 | .234 |
| Saved for a long-term goal such as a car, education, home, etc. | .234 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Bought bonds, stocks, or mutual funds | 3.6208 | 1.538 | .234 | .055 | .a |
| Saved for a long term goal such as a car, education,home, etc.. | 3.2571 | 1.707 | .234 | .055 | .a |

a. The value is negative due to a negative average covariance among items. This violates reliability model assumptions. You may want to check item codings.

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|--------|----------|----------------|------------|
| 6.8779 | 4.003 | 2.00082 | 2 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|---|
| Output Created | | 14-Mar-2022 06:22:35 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS12 FMBS10 FMBS11 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.000 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .346 | .348 | 3 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Bought bonds, stocks, or mutual funds | 3.2571 | 1.30658 | 385 |
| Saved for a long term goal such as a car, education, home, etc.. | 3.6208 | 1.24021 | 385 |
| Contributed money to a retirement account | 3.7299 | 1.26234 | 385 |

Inter-Item Correlation Matrix

| | Bought bonds, stocks, or mutual funds | Saved for a long term goal such as a car, education, home, etc.. | Contributed money to a retirement account |
|--|---------------------------------------|--|---|
| Bought bonds, stocks, or mutual funds | 1.000 | .234 | .045 |
| Saved for a long term goal such as a car, education, home, etc.. | .234 | 1.000 | .174 |
| Contributed money to a retirement account | .045 | .174 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Bought bonds, stocks, or mutual funds | 7.3506 | 3.676 | .181 | .055 | .296 |
| Saved for a long term goal such as a car, education, home, etc.. | 6.9870 | 3.450 | .283 | .081 | .087 |
| Contributed money to a retirement account | 6.8779 | 4.003 | .137 | .030 | .379 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 10.6078 | 6.291 | 2.50820 | 3 |

Reliability

Notes

| | | |
|---------------------------|-----------------------------------|--|
| Output Created | | 14-Mar-2022 06:25:42 |
| Comments | | |
| Input | Data | C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav |
| | Active Dataset | DataSet1 |
| | Filter | <none> |
| | Weight | <none> |
| | Split File | <none> |
| | N of Rows in Working Data File | 385 |
| | Matrix Input | |
| Missing Value Handling | Definition of Missing | User-defined missing values are treated as missing. |
| | Cases Used | Statistics are based on all cases with valid data for all variables in the procedure. |
| Syntax | | RELIABILITY /VARIABLES=FMBS12 FMBS10 FMBS9 /SCALE('ALL VARIABLES') ALL /MODEL=ALPHA /STATISTICS=DESCRIPTIVE SCALE CORR /SUMMARY=TOTAL. |
| Resources | Processor Time | 00:00:00.000 |
| | Elapsed Time | 00:00:00.000 |

[DataSet1] C:\Users\DR LEKE\Documents\kay literature\analysis folder\omolayo.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|-----|-------|
| Cases | Valid | 385 | 100.0 |
| | Excluded ^a | 0 | .0 |
| | Total | 385 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardised Items | N of Items |
|------------------|--|------------|
| .391 | .390 | 3 |

Item Statistics

| | Mean | Std. Deviation | N |
|--|--------|----------------|-----|
| Bought bonds, stocks, or mutual funds | 3.2571 | 1.30658 | 385 |
| Saved for a long term goal such as a car, education, home, etc.. | 3.6208 | 1.24021 | 385 |
| Saved money from every paycheck | 3.3870 | 1.24722 | 385 |

Inter-Item Correlation Matrix

| | Bought bonds, stocks, or mutual funds | Saved for a long term goal such as a car, education, home, etc.. | Saved money from every paycheck |
|--|---------------------------------------|--|---------------------------------|
| Bought bonds, stocks, or mutual funds | 1.000 | .234 | .167 |
| Saved for a long term goal such as a car, education, home, etc.. | .234 | 1.000 | .125 |
| Saved money from every paycheck | .167 | .125 | 1.000 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Squared Multiple Correlation | Cronbach's Alpha if Item Deleted |
|--|----------------------------|--------------------------------|----------------------------------|------------------------------|----------------------------------|
| Bought bonds, stocks, or mutual funds | 7.0078 | 3.482 | .267 | .074 | .223 |
| Saved for a long term goal such as a car, education, home, etc.. | 6.6442 | 3.808 | .237 | .062 | .286 |
| Saved money from every paycheck | 6.8779 | 4.003 | .187 | .036 | .379 |

Scale Statistics

| Mean | Variance | Std. Deviation | N of Items |
|---------|----------|----------------|------------|
| 10.2649 | 6.492 | 2.54797 | 3 |

Rotated Component Matrix^a

| | Component | | | | | |
|---|-----------|------|------|------|------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 |
| Comparison shopped when purchasing a product or service | | | | | | .747 |
| Paid all your bills on time | | | | .608 | | |
| Kept a written or electronic record of your monthly expenses | | | | | .758 | |
| Stayed within your budget or spending plan | | | | .656 | | |
| Paid off credit card balance in full each month | | | | .543 | .431 | |
| Maxed out the limit on one or more credit cards | | | | | .612 | |
| Made only minimum payments on a loan | | | | | .748 | |
| Began or maintained an emergency savings fund | | | .463 | | | |
| Saved money from every paycheck | | | .542 | | | |
| Saved for a long term goal such as a car, education,home, etc.. | | | .507 | | | |
| Contributed money to a retirement account | | | .804 | | | |
| Bought bonds, stocks, or mutual funds | | | .665 | | | |
| Maintained or purchased an adequate health insurance policy | | .762 | | | | |

| | | | | | | |
|---|------|------|--|--|------|--|
| Maintained or purchased adequate property insurance like auto or homeowners insurance | | .708 | | | | |
| Maintained or purchased adequate life insurance | | .519 | | | | |
| I usually have a separate budget for religion activities e.g Tithe and offering | .507 | | | | | |
| There is often a separate budget for social events | .511 | | | | | |
| Saved money and even borrow to finance socio cultural events | .447 | | | | .504 | |

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 24 iterations.

Communalities

| | Initial | Extraction |
|---|---------|------------|
| Comparison shopped when purchasing a product or service | 1.000 | .570 |
| Paid all your bills on time | 1.000 | .526 |
| Kept a written or electronic record of your monthly expenses | 1.000 | .589 |
| Stayed within your budget or spending plan | 1.000 | .610 |
| Paid off credit card balance in full each month | 1.000 | .472 |
| Maxed out the limit on one or more credit cards | 1.000 | .469 |
| Made only minimum payments on a loan | 1.000 | .610 |
| Began or maintained an emergency savings fund | 1.000 | .427 |
| Saved money from every paycheck | 1.000 | .459 |
| Saved for a long term goal such as a car, education, home, etc.. | 1.000 | .471 |
| Contributed money to a retirement account | 1.000 | .720 |
| Bought bonds, stocks, or mutual funds | 1.000 | .657 |
| Maintained or purchased an adequate health insurance policy | 1.000 | .595 |
| Maintained or purchased adequate property insurance like auto or homeowners insurance | 1.000 | .561 |
| Maintained or purchased adequate life insurance | 1.000 | .544 |
| I usually have a separate budget for religion activities e.g Tithe and offering | 1.000 | .465 |
| There is often a separate budget for social events | 1.000 | .623 |
| Saved money and even borrow to finance socio cultural events | 1.000 | .551 |

Extraction Method: Principal Component Analysis.

_____ (R)

//___//___/

___//___//___/ 14.0 Copyright 1985-2015 StataCorp LP

Statistics/Data Analysis StataCorp

4905 Lakeway Drive

Special Edition College Station, Texas 77845 USA

800-STATA-PC <http://www.stata.com>

979-696-4600 stata@stata.com

979-696-4601 (fax)

65-user Stata network perpetual license:

Serial number: 401406214261

Licensed to: Riethwaan Salie

University of Cape Town

Notes:

1. Unicode is supported; see help `unicode_advice`.
2. Maximum number of variables is set to 5000; see help `set_maxvar`.

Checking for updates...

(contacting <http://www.stata.com>)

Update status

Last check for updates: 08 Mar 2022

New update available: 29 Jan 2018 (what's new)

Current update level: 05 May 2015 (what's new)

Comment

Stata 17 available

Find out more: stata.com/new-in-stata

New features:

Tables PyStata

Bayesian econometrics Jupyter Notebook with Stata

Interval-censored Cox model Faster Stata
Differences-in-differences (DID) Bayesian multilevel modeling
Bayesian VAR New functions for dates and times
Multivariate meta-analysis Leave-one-out meta-analysis
Treatment-effects lasso Galbraith plots
Panel-data multinomial logit Bayesian panel-data models
Zero-inflated ordered logit Nonparametric tests for trend
Bayesian IRF and FEVD analysis Lasso with clustered data
Bayesian dynamic forecasting BIC for lasso penalty selection
Do-file Editor enhancements Bayesian linear and nonlinear DSGEs
Intel Math Kernel Library (MKL) H2O integration
Stata on Apple Silicon Java integration
JDBC

and more

Possible actions

Install available updates (or type -update all-)

Click to edit automatic update checking preferences

```
.*(41 variables, 385 observations pasted into data editor)
```

```
. save "C:\Users\DR LEKE\Documents\memory card\Stata14\omolayo.dta"
```

```
file C:\Users\DR LEKE\Documents\memory card\Stata14\omolayo.dta saved
```

```
. pca fmbs1 fmbs2 fmbs3 fmbs4 fmbs5 fmbs6 fmbs7 fmbs8 fmbs9 fmbs10 fmbs11 fmbs1  
> 2 fmbs13 fmbs14 fmbs15 fmbs16 fmbs17 fmbs18
```

Principal components/correlation Number of obs = 385

Number of comp. = 18

Trace = 18

Rotation: (unrotated = principal) Rho = 1.0000

| Component | Eigenvalue | Difference | Proportion | Cumulative |
|-----------|------------|------------|------------|------------|
| Comp1 | 3.19081 | 1.41588 | 0.1773 | 0.1773 |
| Comp2 | 1.77494 | .339145 | 0.0986 | 0.2759 |
| Comp3 | 1.43579 | .132105 | 0.0798 | 0.3556 |
| Comp4 | 1.30369 | .157127 | 0.0724 | 0.4281 |
| Comp5 | 1.14656 | .0807138 | 0.0637 | 0.4918 |
| Comp6 | 1.06585 | .072664 | 0.0592 | 0.5510 |
| Comp7 | .993183 | .0523157 | 0.0552 | 0.6062 |
| Comp8 | .940867 | .00594433 | 0.0523 | 0.6584 |
| Comp9 | .934923 | .1559 | 0.0519 | 0.7104 |
| Comp10 | .779023 | .0221176 | 0.0433 | 0.7536 |
| Comp11 | .756906 | .0938817 | 0.0421 | 0.7957 |
| Comp12 | .663024 | .0286636 | 0.0368 | 0.8325 |
| Comp13 | .63436 | .0400803 | 0.0352 | 0.8678 |
| Comp14 | .59428 | .0667593 | 0.0330 | 0.9008 |
| Comp15 | .527521 | .0728952 | 0.0293 | 0.9301 |
| Comp16 | .454626 | .0228996 | 0.0253 | 0.9554 |
| Comp17 | .431726 | .0598035 | 0.0240 | 0.9793 |
| Comp18 | .371923 | . | 0.0207 | 1.0000 |

Principal components (eigenvectors)

Variable | Comp1 Comp2 Comp3 Comp4 Comp5 Comp6

| | | | | | | |
|--------|---------|---------|---------|---------|---------|---------|
| fmbs1 | 0.0292 | 0.1781 | 0.0570 | 0.4870 | -0.2732 | -0.3233 |
| fmbs2 | -0.0130 | 0.3320 | 0.2353 | 0.0494 | 0.1092 | 0.4681 |
| fmbs3 | 0.2415 | -0.3342 | 0.1868 | 0.2344 | 0.2619 | -0.0624 |
| fmbs4 | 0.1943 | 0.1667 | 0.4068 | 0.0831 | -0.3884 | 0.1393 |
| fmbs5 | 0.2251 | 0.1578 | 0.3580 | 0.0470 | 0.0212 | 0.2710 |
| fmbs6 | 0.2403 | -0.1666 | 0.2072 | 0.2045 | 0.0879 | -0.3224 |
| fmbs7 | 0.2077 | 0.0543 | -0.4474 | 0.3469 | -0.0050 | 0.1457 |
| fmbs8 | 0.2989 | 0.2091 | 0.1628 | 0.1302 | -0.0435 | 0.0402 |
| fmbs9 | 0.1516 | 0.3726 | -0.0619 | -0.1348 | -0.2218 | -0.2237 |
| fmbs10 | 0.2196 | 0.1874 | -0.2967 | 0.2929 | -0.0069 | -0.1250 |
| fmbs11 | 0.0974 | 0.3204 | -0.1217 | 0.2042 | 0.6137 | -0.0134 |
| fmbs12 | 0.2732 | 0.0463 | -0.3216 | -0.1271 | -0.1024 | 0.4675 |
| fmbs13 | 0.2735 | 0.1947 | 0.0241 | -0.4082 | -0.0366 | -0.2559 |
| fmbs14 | 0.3362 | 0.1136 | -0.0171 | -0.2848 | 0.0260 | -0.2570 |
| fmbs15 | 0.3334 | -0.0600 | -0.2221 | -0.2785 | 0.0981 | -0.0074 |
| fmbs16 | 0.1891 | -0.0960 | 0.2853 | -0.1122 | 0.4185 | -0.0099 |
| fmbs17 | 0.3162 | -0.3560 | -0.0370 | 0.1307 | -0.1310 | 0.1825 |
| fmbs18 | 0.2684 | -0.3877 | -0.0136 | -0.0223 | -0.2089 | 0.0585 |

| Variable | Comp7 | Comp8 | Comp9 | Comp10 | Comp11 | Comp12 |
|----------|-------|-------|-------|--------|--------|--------|
|----------|-------|-------|-------|--------|--------|--------|

| | | | | | | |
|-------|---------|---------|---------|---------|---------|---------|
| fmbs1 | 0.2487 | 0.0959 | 0.5219 | 0.0011 | 0.2184 | 0.0792 |
| fmbs2 | 0.1127 | 0.5395 | 0.1150 | 0.2312 | -0.0706 | 0.2421 |
| fmbs3 | -0.1724 | -0.0741 | -0.0441 | 0.3862 | 0.3222 | 0.1462 |
| fmbs4 | 0.1537 | -0.1396 | -0.1381 | -0.0926 | -0.3232 | 0.1639 |
| fmbs5 | -0.5130 | -0.1523 | 0.2107 | 0.1215 | 0.2240 | -0.2479 |
| fmbs6 | -0.0284 | 0.3829 | -0.3778 | 0.2162 | -0.2859 | -0.2405 |
| fmbs7 | 0.0280 | -0.0849 | 0.2046 | 0.2709 | -0.4221 | -0.1752 |

| | | | | | | | |
|--------|--|---------|---------|---------|---------|---------|---------|
| fmbs8 | | -0.0515 | -0.1866 | -0.3026 | -0.4011 | -0.1133 | 0.0030 |
| fmbs9 | | 0.1175 | -0.3811 | -0.2566 | 0.4910 | 0.2091 | 0.1594 |
| fmbs10 | | -0.1127 | 0.3224 | -0.2903 | -0.3306 | 0.3855 | 0.1666 |
| fmbs11 | | 0.1097 | -0.2613 | -0.0110 | -0.0437 | -0.1895 | -0.0896 |
| fmbs12 | | 0.2306 | 0.0283 | -0.1213 | 0.0388 | 0.3248 | -0.2635 |
| fmbs13 | | 0.0964 | 0.3344 | 0.0897 | 0.0543 | 0.0269 | -0.4395 |
| fmbs14 | | -0.2110 | -0.0500 | 0.4040 | -0.1680 | -0.1240 | 0.0285 |
| fmbs15 | | -0.1593 | 0.1258 | 0.0637 | 0.0687 | -0.1661 | 0.6370 |
| fmbs16 | | 0.5639 | -0.0988 | 0.1159 | -0.1672 | 0.1848 | 0.0662 |
| fmbs17 | | -0.0834 | -0.0434 | 0.1368 | -0.2469 | 0.0114 | -0.0454 |
| fmbs18 | | 0.3299 | -0.0542 | 0.0193 | 0.1200 | -0.0670 | 0.0104 |

| Variable | | Comp13 | Comp14 | Comp15 | Comp16 | Comp17 | Comp18 |
|----------|--|--------|--------|--------|--------|--------|--------|
|----------|--|--------|--------|--------|--------|--------|--------|

| | | | | | | | |
|--------|--|---------|---------|---------|---------|---------|---------|
| fmbs1 | | 0.0294 | -0.1499 | -0.0040 | 0.2143 | -0.0514 | 0.2802 |
| fmbs2 | | 0.2744 | 0.0494 | 0.2331 | -0.0352 | -0.0036 | -0.1830 |
| fmbs3 | | 0.1465 | 0.1160 | -0.3160 | 0.3174 | -0.1109 | -0.3292 |
| fmbs4 | | -0.4323 | 0.3068 | -0.2450 | 0.1499 | -0.1037 | -0.1246 |
| fmbs5 | | -0.1470 | -0.0176 | -0.0377 | -0.3186 | 0.1470 | 0.3413 |
| fmbs6 | | -0.1682 | -0.2205 | 0.2542 | -0.0715 | -0.2347 | 0.1997 |
| fmbs7 | | -0.0680 | -0.2054 | -0.2511 | -0.2510 | 0.1498 | -0.2912 |
| fmbs8 | | 0.5791 | -0.3833 | -0.1423 | 0.0995 | 0.0683 | 0.0115 |
| fmbs9 | | 0.0164 | -0.0681 | 0.3694 | -0.0920 | 0.1280 | -0.1252 |
| fmbs10 | | -0.1443 | 0.2866 | -0.0748 | -0.3359 | 0.0692 | -0.1205 |
| fmbs11 | | -0.0106 | 0.4128 | 0.1698 | 0.2495 | -0.0010 | 0.2584 |
| fmbs12 | | -0.1238 | -0.1531 | -0.0384 | 0.2447 | -0.4509 | 0.1615 |
| fmbs13 | | 0.0479 | 0.1515 | -0.2364 | 0.2557 | 0.4157 | -0.0894 |
| fmbs14 | | 0.1119 | 0.0972 | 0.1536 | -0.1611 | -0.5683 | -0.2772 |
| fmbs15 | | -0.1533 | -0.1894 | -0.1263 | 0.1439 | 0.1575 | 0.3802 |

```
fmbs16 | -0.2442 -0.2897 -0.0450 -0.3216 0.1052 -0.1345
fmbs17 | -0.1161 0.0173 0.6053 0.2688 0.3372 -0.2182
fmbs18 | 0.4216 0.4431 -0.0157 -0.3449 0.0269 0.3237
```

```
-----
Variable | Unexplained
```

```
-----+-----
fmbs1 | 0
fmbs2 | 0
fmbs3 | 0
fmbs4 | 0
fmbs5 | 0
fmbs6 | 0
fmbs7 | 0
fmbs8 | 0
fmbs9 | 0
fmbs10 | 0
fmbs11 | 0
fmbs12 | 0
fmbs13 | 0
fmbs14 | 0
fmbs15 | 0
fmbs16 | 0
fmbs17 | 0
fmbs18 | 0
```

```
-----
.rotate
```

```
Principal components/correlation   Number of obs = 385
```

Number of comp. = 18

Trace = 18

Rotation: orthogonal varimax (Kaiser off) Rho = 1.0000

| Component | Variance | Difference | Proportion | Cumulative |
|-----------|----------------|------------|------------|------------|
| Comp1 | 1 -1.77541e-08 | 0.0556 | 0.0556 | |
| Comp2 | 1 -1.27332e-10 | 0.0556 | 0.1111 | |
| Comp3 | 1 -1.80784e-08 | 0.0556 | 0.1667 | |
| Comp4 | 1 1.79063e-08 | 0.0556 | 0.2222 | |
| Comp5 | 1 -2.07008e-11 | 0.0556 | 0.2778 | |
| Comp6 | 1 1.18344e-10 | 0.0556 | 0.3333 | |
| Comp7 | 1 -1.05479e-10 | 0.0556 | 0.3889 | |
| Comp8 | 1 1.25936e-10 | 0.0556 | 0.4444 | |
| Comp9 | 1 -1.08601e-10 | 0.0556 | 0.5000 | |
| Comp10 | 1 1.20977e-09 | 0.0556 | 0.5556 | |
| Comp11 | 1 -1.21634e-09 | 0.0556 | 0.6111 | |
| Comp12 | 1 4.41045e-11 | 0.0556 | 0.6667 | |
| Comp13 | 1 -1.72472e-10 | 0.0556 | 0.7222 | |
| Comp14 | 1 1.50058e-10 | 0.0556 | 0.7778 | |
| Comp15 | 1 -1.32744e-09 | 0.0556 | 0.8333 | |
| Comp16 | 1 1.21872e-09 | 0.0556 | 0.8889 | |
| Comp17 | 1 -3.50978e-10 | 0.0556 | 0.9444 | |
| Comp18 | 1 . | 0.0556 | 1.0000 | |

Rotated components

| Variable | Comp1 | Comp2 | Comp3 | Comp4 | Comp5 | Comp6 |
|----------|-------|-------|-------|-------|-------|-------|
|----------|-------|-------|-------|-------|-------|-------|

```

-----+-----
fmbs1 | 0.0000 0.0000 -0.0000 -0.0000 -0.0000 0.0000
fmbs2 | 0.0000 -0.0000 0.0000 -0.0000 -0.0000 -0.0000
fmbs3 | 0.0000 1.0000 -0.0000 -0.0000 0.0000 -0.0000
fmbs4 | -0.0000 0.0000 1.0000 0.0000 -0.0000 0.0000
fmbs5 | -0.0000 -0.0000 -0.0000 -0.0000 0.0000 0.0000
fmbs6 | 1.0000 -0.0000 0.0000 0.0000 -0.0000 0.0000
fmbs7 | -0.0000 0.0000 0.0000 -0.0000 -0.0000 0.0000
fmbs8 | 0.0000 -0.0000 0.0000 0.0000 0.0000 0.0000
fmbs9 | 0.0000 0.0000 0.0000 -0.0000 -0.0000 0.0000
fmbs10 | -0.0000 0.0000 -0.0000 -0.0000 -0.0000 -0.0000
fmbs11 | 0.0000 -0.0000 0.0000 0.0000 1.0000 -0.0000
fmbs12 | -0.0000 0.0000 -0.0000 -0.0000 0.0000 1.0000
fmbs13 | -0.0000 0.0000 -0.0000 1.0000 -0.0000 0.0000
fmbs14 | -0.0000 0.0000 0.0000 -0.0000 0.0000 0.0000
fmbs15 | -0.0000 -0.0000 -0.0000 -0.0000 -0.0000 0.0000
fmbs16 | -0.0000 -0.0000 -0.0000 -0.0000 0.0000 0.0000
fmbs17 | 0.0000 0.0000 0.0000 0.0000 0.0000 -0.0000
fmbs18 | -0.0000 -0.0000 -0.0000 0.0000 -0.0000 -0.0000
-----

```

```

-----+-----
Variable | Comp7  Comp8  Comp9  Comp10  Comp11  Comp12
-----+-----
fmbs1 | 0.0000 0.0000 1.0000 0.0000 0.0000 -0.0000
fmbs2 | -0.0000 1.0000 -0.0000 0.0000 -0.0000 0.0000
fmbs3 | 0.0000 0.0000 -0.0000 -0.0000 -0.0000 0.0000
fmbs4 | 0.0000 -0.0000 0.0000 -0.0000 -0.0000 0.0000
fmbs5 | -0.0000 0.0000 -0.0000 -0.0000 -0.0000 -0.0000
fmbs6 | 0.0000 -0.0000 -0.0000 -0.0000 0.0000 0.0000
fmbs7 | 0.0000 0.0000 -0.0000 0.0000 1.0000 0.0000

```

| | | | | | | | |
|--------|--|---------|---------|---------|---------|---------|---------|
| fmbs8 | | 0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs9 | | -0.0000 | -0.0000 | -0.0000 | 1.0000 | -0.0000 | -0.0000 |
| fmbs10 | | 0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs11 | | -0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs12 | | -0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs13 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs14 | | -0.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | 0.0000 |
| fmbs15 | | 0.0000 | -0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.0000 |
| fmbs16 | | 1.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | -0.0000 |
| fmbs17 | | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs18 | | -0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 |

| Variable | | Comp13 | Comp14 | Comp15 | Comp16 | Comp17 | Comp18 |
|----------|--|--------|--------|--------|--------|--------|--------|
|----------|--|--------|--------|--------|--------|--------|--------|

| | | | | | | | |
|--------|--|---------|---------|---------|---------|---------|---------|
| fmbs1 | | 0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs2 | | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs3 | | 0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 |
| fmbs4 | | -0.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | 0.0000 |
| fmbs5 | | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.0000 | 1.0000 |
| fmbs6 | | -0.0000 | 0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs7 | | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs8 | | 1.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 |
| fmbs9 | | 0.0000 | -0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.0000 |
| fmbs10 | | -0.0000 | -0.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 |
| fmbs11 | | -0.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | -0.0000 |
| fmbs12 | | -0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | -0.0000 |
| fmbs13 | | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs14 | | -0.0000 | -0.0000 | 0.0000 | -0.0000 | 1.0000 | -0.0000 |
| fmbs15 | | -0.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | 0.0000 |

fmbs16 | -0.0000 0.0000 -0.0000 -0.0000 0.0000 0.0000
fmbs17 | -0.0000 -0.0000 1.0000 -0.0000 -0.0000 -0.0000
fmbs18 | -0.0000 1.0000 0.0000 0.0000 0.0000 -0.0000

Variable | Unexplained

-----+-----
fmbs1 | 0
fmbs2 | 0
fmbs3 | 0
fmbs4 | 0
fmbs5 | 0
fmbs6 | 0
fmbs7 | 0
fmbs8 | 0
fmbs9 | 0
fmbs10 | 0
fmbs11 | 0
fmbs12 | 0
fmbs13 | 0
fmbs14 | 0
fmbs15 | 0
fmbs16 | 0
fmbs17 | 0
fmbs18 | 0

Component rotation matrix

| Comp1 Comp2 Comp3 Comp4 Comp5 Comp6

-----+-----
Comp1 | 0.2403 0.2415 0.1943 0.2735 0.0974 0.2732
Comp2 | -0.1666 -0.3342 0.1667 0.1947 0.3204 0.0463
Comp3 | 0.2072 0.1868 0.4068 0.0241 -0.1217 -0.3216
Comp4 | 0.2045 0.2344 0.0831 -0.4082 0.2042 -0.1271
Comp5 | 0.0879 0.2619 -0.3884 -0.0366 0.6137 -0.1024
Comp6 | -0.3224 -0.0624 0.1393 -0.2559 -0.0134 0.4675
Comp7 | -0.0284 -0.1724 0.1537 0.0964 0.1097 0.2306
Comp8 | 0.3829 -0.0741 -0.1396 0.3344 -0.2613 0.0283
Comp9 | -0.3778 -0.0441 -0.1381 0.0897 -0.0110 -0.1213
Comp10 | 0.2162 0.3862 -0.0926 0.0543 -0.0437 0.0388
Comp11 | -0.2859 0.3222 -0.3232 0.0269 -0.1895 0.3248
Comp12 | -0.2405 0.1462 0.1639 -0.4395 -0.0896 -0.2635
Comp13 | -0.1682 0.1465 -0.4323 0.0479 -0.0106 -0.1238
Comp14 | -0.2205 0.1160 0.3068 0.1515 0.4128 -0.1531
Comp15 | 0.2542 -0.3160 -0.2450 -0.2364 0.1698 -0.0384
Comp16 | -0.0715 0.3174 0.1499 0.2557 0.2495 0.2447
Comp17 | -0.2347 -0.1109 -0.1037 0.4157 -0.0010 -0.4509
Comp18 | 0.1997 -0.3292 -0.1246 -0.0894 0.2584 0.1615

| Comp7 Comp8 Comp9 Comp10 Comp11 Comp12

-----+-----
Comp1 | 0.1891 -0.0130 0.0292 0.1516 0.2077 0.3334
Comp2 | -0.0960 0.3320 0.1781 0.3726 0.0543 -0.0600
Comp3 | 0.2853 0.2353 0.0570 -0.0619 -0.4474 -0.2221
Comp4 | -0.1122 0.0494 0.4870 -0.1348 0.3469 -0.2785
Comp5 | 0.4185 0.1092 -0.2732 -0.2218 -0.0050 0.0981
Comp6 | -0.0099 0.4681 -0.3233 -0.2237 0.1457 -0.0074

Comp7 | 0.5639 0.1127 0.2487 0.1175 0.0280 -0.1593
Comp8 | -0.0988 0.5395 0.0959 -0.3811 -0.0849 0.1258
Comp9 | 0.1159 0.1150 0.5219 -0.2566 0.2046 0.0637
Comp10 | -0.1672 0.2312 0.0011 0.4910 0.2709 0.0687
Comp11 | 0.1848 -0.0706 0.2184 0.2091 -0.4221 -0.1661
Comp12 | 0.0662 0.2421 0.0792 0.1594 -0.1752 0.6370
Comp13 | -0.2442 0.2744 0.0294 0.0164 -0.0680 -0.1533
Comp14 | -0.2897 0.0494 -0.1499 -0.0681 -0.2054 -0.1894
Comp15 | -0.0450 0.2331 -0.0040 0.3694 -0.2511 -0.1263
Comp16 | -0.3216 -0.0352 0.2143 -0.0920 -0.2510 0.1439
Comp17 | 0.1052 -0.0036 -0.0514 0.1280 0.1498 0.1575
Comp18 | -0.1345 -0.1830 0.2802 -0.1252 -0.2912 0.3802

| Comp13 Comp14 Comp15 Comp16 Comp17 Comp18

Comp1 | 0.2989 0.2684 0.3162 0.2196 0.3362 0.2251
Comp2 | 0.2091 -0.3877 -0.3560 0.1874 0.1136 0.1578
Comp3 | 0.1628 -0.0136 -0.0370 -0.2967 -0.0171 0.3580
Comp4 | 0.1302 -0.0223 0.1307 0.2929 -0.2848 0.0470
Comp5 | -0.0435 -0.2089 -0.1310 -0.0069 0.0260 0.0212
Comp6 | 0.0402 0.0585 0.1825 -0.1250 -0.2570 0.2710
Comp7 | -0.0515 0.3299 -0.0834 -0.1127 -0.2110 -0.5130
Comp8 | -0.1866 -0.0542 -0.0434 0.3224 -0.0500 -0.1523
Comp9 | -0.3026 0.0193 0.1368 -0.2903 0.4040 0.2107
Comp10 | -0.4011 0.1200 -0.2469 -0.3306 -0.1680 0.1215
Comp11 | -0.1133 -0.0670 0.0114 0.3855 -0.1240 0.2240
Comp12 | 0.0030 0.0104 -0.0454 0.1666 0.0285 -0.2479
Comp13 | 0.5791 0.4216 -0.1161 -0.1443 0.1119 -0.1470
Comp14 | -0.3833 0.4431 0.0173 0.2866 0.0972 -0.0176

Comp15 | -0.1423 -0.0157 0.6053 -0.0748 0.1536 -0.0377
 Comp16 | 0.0995 -0.3449 0.2688 -0.3359 -0.1611 -0.3186
 Comp17 | 0.0683 0.0269 0.3372 0.0692 -0.5683 0.1470
 Comp18 | 0.0115 0.3237 -0.2182 -0.1205 -0.2772 0.3413

. predict fmbs
 (score assumed)
 (17 components skipped)

Scoring coefficients for orthogonal varimax rotation
 sum of squares(column-loading) = 1

| Variable | Comp1 | Comp2 | Comp3 | Comp4 | Comp5 | Comp6 |
|----------|---------|---------|---------|---------|---------|---------|
| fmbs1 | 0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 |
| fmbs2 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs3 | 0.0000 | 1.0000 | -0.0000 | -0.0000 | 0.0000 | -0.0000 |
| fmbs4 | -0.0000 | 0.0000 | 1.0000 | 0.0000 | -0.0000 | 0.0000 |
| fmbs5 | -0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs6 | 1.0000 | -0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.0000 |
| fmbs7 | -0.0000 | 0.0000 | 0.0000 | -0.0000 | -0.0000 | 0.0000 |
| fmbs8 | 0.0000 | -0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs9 | 0.0000 | 0.0000 | 0.0000 | -0.0000 | -0.0000 | 0.0000 |
| fmbs10 | -0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs11 | 0.0000 | -0.0000 | 0.0000 | 0.0000 | 1.0000 | -0.0000 |
| fmbs12 | -0.0000 | 0.0000 | -0.0000 | -0.0000 | 0.0000 | 1.0000 |
| fmbs13 | -0.0000 | 0.0000 | -0.0000 | 1.0000 | -0.0000 | 0.0000 |
| fmbs14 | -0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs15 | -0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 |

| | | | | | | | |
|--------|--|---------|---------|---------|---------|---------|---------|
| fmbs16 | | -0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs17 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 |
| fmbs18 | | -0.0000 | -0.0000 | -0.0000 | 0.0000 | -0.0000 | -0.0000 |

| Variable | | Comp7 | Comp8 | Comp9 | Comp10 | Comp11 | Comp12 |
|----------|--|-------|-------|-------|--------|--------|--------|
|----------|--|-------|-------|-------|--------|--------|--------|

| | | | | | | | |
|--------|--|---------|---------|---------|---------|---------|---------|
| fmbs1 | | 0.0000 | 0.0000 | 1.0000 | 0.0000 | 0.0000 | -0.0000 |
| fmbs2 | | -0.0000 | 1.0000 | -0.0000 | 0.0000 | -0.0000 | 0.0000 |
| fmbs3 | | 0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 |
| fmbs4 | | 0.0000 | -0.0000 | 0.0000 | -0.0000 | -0.0000 | 0.0000 |
| fmbs5 | | -0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs6 | | 0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs7 | | 0.0000 | 0.0000 | -0.0000 | 0.0000 | 1.0000 | 0.0000 |
| fmbs8 | | 0.0000 | -0.0000 | -0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs9 | | -0.0000 | -0.0000 | -0.0000 | 1.0000 | -0.0000 | -0.0000 |
| fmbs10 | | 0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs11 | | -0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs12 | | -0.0000 | 0.0000 | -0.0000 | -0.0000 | -0.0000 | -0.0000 |
| fmbs13 | | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 |
| fmbs14 | | -0.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | 0.0000 |
| fmbs15 | | 0.0000 | -0.0000 | 0.0000 | 0.0000 | -0.0000 | 1.0000 |
| fmbs16 | | 1.0000 | 0.0000 | -0.0000 | 0.0000 | -0.0000 | -0.0000 |
| fmbs17 | | 0.0000 | 0.0000 | 0.0000 | -0.0000 | 0.0000 | 0.0000 |
| fmbs18 | | -0.0000 | 0.0000 | 0.0000 | 0.0000 | 0.0000 | -0.0000 |

| Variable | | Comp13 | Comp14 | Comp15 | Comp16 | Comp17 | Comp18 |
|----------|--|--------|--------|--------|--------|--------|--------|
|----------|--|--------|--------|--------|--------|--------|--------|

fmbs1 | 0.0000 -0.0000 -0.0000 0.0000 0.0000 0.0000
fmbs2 | 0.0000 -0.0000 -0.0000 -0.0000 -0.0000 -0.0000
fmbs3 | 0.0000 0.0000 -0.0000 -0.0000 -0.0000 0.0000
fmbs4 | -0.0000 0.0000 -0.0000 0.0000 -0.0000 0.0000
fmbs5 | 0.0000 0.0000 0.0000 -0.0000 0.0000 1.0000
fmbs6 | -0.0000 0.0000 -0.0000 0.0000 0.0000 0.0000
fmbs7 | -0.0000 -0.0000 -0.0000 0.0000 0.0000 0.0000
fmbs8 | 1.0000 0.0000 0.0000 0.0000 0.0000 -0.0000
fmbs9 | 0.0000 -0.0000 0.0000 0.0000 -0.0000 0.0000
fmbs10 | -0.0000 -0.0000 0.0000 1.0000 0.0000 0.0000
fmbs11 | -0.0000 0.0000 -0.0000 0.0000 -0.0000 -0.0000
fmbs12 | -0.0000 0.0000 0.0000 0.0000 -0.0000 -0.0000
fmbs13 | -0.0000 -0.0000 -0.0000 0.0000 0.0000 0.0000
fmbs14 | -0.0000 -0.0000 0.0000 -0.0000 1.0000 -0.0000
fmbs15 | -0.0000 0.0000 -0.0000 0.0000 -0.0000 0.0000
fmbs16 | -0.0000 0.0000 -0.0000 -0.0000 0.0000 0.0000
fmbs17 | -0.0000 -0.0000 1.0000 -0.0000 -0.0000 -0.0000
fmbs18 | -0.0000 1.0000 0.0000 0.0000 0.0000 -0.0000

01 October 2021

Sunday Kayode Omolayo (219088530)
School Of Acc Economics & Fin
Westville Campus

Dear SK Omolayo,

Protocol reference number: HSSREC/00003376/2021

Project title: An investigation of Financial Management Behaviour of Administrators, Budget Slacks and State Owned Enterprises' Performance in Nigeria

Degree: PhD

Approval Notification – Expedited Application

This letter serves to notify you that your application received on 17 September 2021 in connection with the above, was reviewed by the Humanities and Social Sciences Research Ethics Committee (HSSREC) and the protocol has been granted FULL APPROVAL.

Any alteration/s to the approved research protocol i.e. Questionnaire/Interview Schedule, Informed Consent Form, Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through the amendment/modification prior to its implementation. In case you have further queries, please quote the above reference number. PLEASE NOTE: Research data should be securely stored in the discipline/department for a period of 5 years.

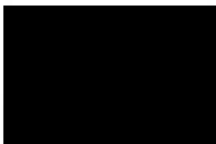
This approval is valid until 01 October 2022.

To ensure uninterrupted approval of this study beyond the approval expiry date, a progress report must be submitted to the Research Office on the appropriate form 2 - 3 months before the expiry date. A close-out report to be submitted when study is finished.

All research conducted during the COVID-19 period must adhere to the national and UKZN guidelines.

HSSREC is registered with the South African National Research Ethics Council (REC-040414-040).

Yours sincerely,



Professor Dipane Hlalele (Chair)

/dd

Humanities and Social Sciences Research Ethics Committee

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Founding Campuses:  Edgewood  Howard College  Medical School  Pietermaritzburg  Westville