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The nexus between the World Governance Indicators' scores on corruption and the financial performance of SOEs in South Africa

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The nexus between the World Governance Indicators' scores on corruption and the financial performance of SOEs in South Africa.

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A research article submitted to the Faculty of Commerce, Law and Management, University of the Witwatersrand

in partial fulfilment of the requirements for the degree

Master of Business Administration

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DECLARATION

I, **Mthokozisi Xolani Mdluli,** declare that this research article is my own work, except as indicated in the references and acknowledgements. It is submitted in partial fulfilment of the requirements for the degree Master of Business Administration in the Graduate School of Business Administration, University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in this or any other university.

Mthokozisi Xolani Mdluli

(Type your name in full here, and sign in the space above)

Signed at **Melville……**

On the ……**……** of **September 2022**

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Chapter 1

Research Topic/Title

The nexus between the World Governance Indicators' scores on corruption and the financial performance of SOEs in South Africa.

1.1 Background

South Africa, according to Crompton et al. (2017), is dealing with a triple threat of poverty, inequality, and unemployment. As a result, the government is faced with the task of meeting all of these urgent demands while being hampered by a tight budget and weak economic growth. Procurement is a critical component of the government's service delivery system, and it has been utilised as a policy tool to achieve the government's socioeconomic goals (Badenhorst-Weiss, 2012). Government spending is required to be thoroughly thought out on this basis before any public funds are spent. As a result, government expenditure should be monitored and evaluated as part of the architecture of all government-led projects (Crompton et al., 2017).

SOEs (State-owned entities), also known as public entities, are tasked with specific responsibilities by the country's constitution in order to assist the state in fulfilling its mandate (Ovens, 2013). In line with international trends, South Africa has implemented corporatisation, or the transfer of state assets or agencies into state-owned corporations, in a number of areas to encourage more effective and efficient service delivery. Increased public procurement is the result of this. Public procurement involves a large amount of money, which has attracted corruption because of the scale at which it is carried out (Crompton et al., 2017).

According to the South African Department of Commerce and Industries, government purchasing power contributed between 15% and 25% of GDP in 2016 (Makube, 2016). Makube (2016) estimates that, between 2013 and 2016, public infrastructure investment in healthcare facilities, schools, water, sanitation, housing, and electrification totalled R827 billion. As a result, the SOEs have been subjected to outside intervention, as well

as possible wrongdoing and corruption. According to recent media reports, the country has unacceptably high levels of corruption (Mantzaris, 2016). Understanding how this corruption affects the workings of SOEs is important if the country wants to attempt to start addressing this scourge. Therefore, this study seeks to investigate the relationship that exists between a known measure of governance in a country, namely the World Governance Indicators and the financial performance of SOEs in South Africa.

1.2 Research Problem Statement and Research Aims

Public procurement has been a source of concern for observers for many years (Badenhorst-Weiss, 2012). According to Mugadza (2018), public procurement accounts for the biggest share (15%–25%) of overall government spending in developing countries. The high level of commitment to public infrastructure spending, such as investments in healthcare facilities, schools, water, sanitation, housing, and electrification, exemplifies this. South Africa is one of the African countries with the highest rates of corruption in governmental procurement (Mugadza, 2018). This seems to have led to the exploitation of the procurement system by corrupt entities and individuals, according to an NGO monitoring corruption in the country; Corruption Watch. In fact, South Africa is said to be losing in the region of R30 billion a year owing to corruption (Mugadza, 2018). Political intervention in the procurement process appears to be the root of the majority of the reported occurrences of corruption in public procurement. The issue is that resource leakage owing to corruption deprives the country of critical resources required for service delivery.

The World Governance Indicators measure fundamental governance structures in a country (Kaufmann et al, 1999, p. 1). Kaufmann et al. (2008) calculate scores for: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption as metrics that can give an indication of the extent of governance in a country. This study investigates the nexus between the World Governance Indicators' scores and the financial performance of SOEs in South Africa.

1.3 Research Objective

The aim of this study is to investigate how levels of corruption in the country, proxied by the World Governance Indicators, affects the performance of State-Owned Entities in South Africa. Therefore, the objective of this study is To assess whether a correlation exists between the World Governance Indicators' scores on corruption for South Africa and the financial performance of SOEs in the country. 1.4 Research Questions

Does a correlation exist between the World Governance Indicators' score on corruption for South Africa and the financial performance of SOEs in South Africa?

1.5 Significance

Manyaka and Nkuna (2014) suggest that corruption is a global problem. They further note that this situation is common in poor countries since resources allocated for socioeconomic or developmental goals are redirected to a small number of unscrupulous individuals (Manyaka & Nkuna, 2014). They go on to state that in the public sector, 'corruption is a severe issue', and that corruption in SOEs has had a disproportionately detrimental impact on the economy's growth. Goto and Ogunnubi (2014) agree with other experts that the economic issues of the African continent are the primary source of corruption. As a result, all corrupting elements that distort the essence of good governance, public service, and a sense of public morality, which are the fundamental leitmotif of every state, are exposed. Government performance, administrative service, and, most importantly, economic, and political growth have all been affected by corruption (Goto & Ogunnubi, 2014).

The study is significant because corruption is a growing worry across society, threatening everyone's livelihood by slowing down service delivery, stifling economic progress, and undermining the state's legitimacy and functioning (Manyaka & Nkuna, 2014). Even though there has been a rise in public attention and concern about corruption, resulting in a great quantity of scholarly research on the subject, the phenomenon continues to be problematic and complex, however, for most developing countries, including South Africa. As a result, this is a topic of public concern. Therefore, this study, will add to the debate on the effects of corruption on the development of society.

Chapter 2

2.1 Literature Review

Regarding the research objectives, this chapter reviews both theoretical and empirical literature. Section 2.1 discusses the theoretical underpinnings, while Section 2.2 looks at other world governance indicators. Section 2.3 presents other factors making an impact on governance in SOE.

2.2 Theoretical Underpinnings

2.2.1 Stewardship theory

According to Chrisman (2019), stewardship theory asserts that people want to achieve higher-order demands through pro-organisational conduct, and that their interests would naturally align with the organisation's goals (and therefore, with its principals). The author suggests that ‘even when the steward's and principal's interests are at odds’, the steward favours cooperation over defection. According to Schillemans and Bjurstrøm (2019), stewardship theory sees the delegate as a trustee who is more concerned with the common good than with private goals. They add that there would be no reason for the superior not to assume that the executive (e.g., a state agency) will execute a delegated duty without (too much) bureaucratic drift if the executive (e.g., a state agency) is not behaving opportunistically but has the same aims as the superior (e.g., a ministry).

Stewardship theory assumptions, according to Chrisman (2019), are both unrealistic and inadequate because they rely on a model that sees humans as self-actualising and other-serving rather than self-interested and self-serving. Second, according to stewardship theory, when people have these ideas, they will put the interests of the principle ahead of their own, favouring organisational goals over individual goals. Third, stewardship theory claims that formal controls like monitoring and incentive-compensation systems are unnecessary and perhaps harmful because people's interests are assumed to be aligned with those of their owners and/or organisations (Chrisman, 2019).

The cases presented before the Judicial Commission of Inquiry, which was formed to investigate allegations of state capture, corruption, and fraud in the public sector,

including state organs, show a lack of stewardship in South African public institutions (Our Mandate, 2021). Senior officials benefitting themselves together with the state, which is contrary to the mandate, demonstrates poor stewardship. This demonstrates a lack of trust between the stewards and the employer.

2.2.2 Agency Theory

Corporate leaders have a moral and financial obligation to behave in the best interests of the parties they serve, according to Swain's (2020) theories on agency theory. When the agent serves the activity for its own gain, each party has distinct goals, or two parties are at odds with each other, conflict emerges between the principle and the agent, causing the organisation's governance practices to be called into question (Swain, 2020).

Swain (2020) goes on to add that the principle and agent dilemma does not present in every company, but rather that it varies by company and culture. Additionally, the agency problem can be minimised through the use of appropriate corporate governance processes, which help organisations to reduce agency costs and ownership difficulties. He suggests also that a number of mechanisms focusing on ownership structure, management shareholding, and others found in the literature on agency challenges can help to alleviate these mechanisms for agency problems and expenses.

Individuals, according to agency theory, are self-interested and will take advantage of the situation when their needs differ from those of their employers (Chrisman, 2019). In his research, he also introduces stewardship theory as an alternative to agency theory, because it recognises that opportunism is not always the result of conflicts of interest (Chrisman, 2019).

Bodie et al. (2019) agree with previous researchers and add that managers appointed as shareholders' representatives are easily enticed to engage in behaviours that are not in the best interests of their patrons, such as empire building, avoiding risky initiatives to save their jobs, or overconsumption of luxuries. As indicated by Bodie et al. (2019) risk preference is a main source of conflict between the principal and the agent, according to Swain (2020). Shareholders are concerned about both market- and stock-return risk,

whereas managers are more concerned with firm risk because it is critical to their existence.

Another excellent example of the agency theory concept is the cases presented to the Judicial Commission of Inquiry, which was established to investigate allegations of state capture, corruption, and fraud in the public sector, including state organs (Our Mandate, 2021). In this scenario, agents are public high officials from SOEs who were entrusted with resources to serve the public on behalf of the principals, namely the state and the general public, but the monies were diverted through corruption to enrich these officials. The public, who should benefit from this procedure, suffers as a result of it. This depicts the agent–principal conflict of interest appropriately.

2.3 The World Governance Indicators

Corporate governance, according to Swain (2020), is a set of policies and processes that form the foundation for a company's operations. Policies should stress transparency, integrity, ethics, and honesty in order to ensure a robust and balanced economy. Furthermore, good corporate governance is essential to allow organisations to operate more efficiently, obtain capital, manage risk, and protect stakeholders. A company can achieve its objectives in terms of regulatory authorities, stakeholders, and so on by adhering to corporate governance policies (Swain, 2020).

While Aart et al. (2021) agree with previous scholars, they expand the meaning of governance and include the traditions and establishments through which power is exercised in a society. They further add that this includes the process of selecting, monitoring, and replacing governments; the government's ability to devise and implement sensible policies; and citizens' and the state's respect for the rule of law. There are six different types of worldwide governance indices, according to Kaufmann et al. (2008):

i. Voice and Accountability (VA)

These elements include perceptions of the ability of a country's people to pick their government, as well as freedom of expression, association, and access to a free press. Strikes are the most common way for South Africans to express their needs, as evidenced

by the violent and lengthy strikes, and there are no mechanisms in place to prevent violent strikes, even though their effects can be seen all over the country (Tenza, 2020). Because of its severe economic consequences, governments and businesses are compelled to comply. Although not all strikes are deadly, they are the most widely used method of communicating a message.

ii. Political Stability and Absence of Violence (PV)

This entails gathering information on public perceptions of the danger of instability or overthrow of the government through unconstitutional or violent measures, such as politically motivated violence and terrorism. South Africa has a country score on the aggregate indicator ranging from roughly -2.5 to 2.5 in units of a standard normal distribution, according to World Bank data (2021). This is a clue that the variables that cause governance issues are still present.

iii. Government Effectiveness (GE)

This means considering views of the quality of public services, civil service quality and independence from political constraints, policy formulation and execution quality, and the credibility of the government's adherence to such policies. South Africa's aggregate indicator score ranges from -2.5 to 2.5 in units of a standard normal distribution, according to World Bank indicators (2021). This is an indicator that the variables that lead to governance issues are still present.

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iv. Regulatory Quality (RQ)

Popular assessments are included of the government’s capacity to establish and administer effective rules and regulations that support and assist private-sector development. In September 2020, the minister published the second ministerial determination issued according to section 34 of the Electricity Regulation Act (Barclay, 2020). The undertaking was made to give effect to the IRP 2019, which allows for the

production of extra-grid capacity from renewable energy, natural gas, hydropower, battery storage, and coal, under section 34 (ministerial determination). As a result, even though the success of execution cannot be guaranteed, the effectiveness of legislative development inside the country can be demonstrated.

v. Rule of Law (RL)

It represents agents' assessments of how much they trust and adhere to society's laws, such as contract enforcement, property rights, the police, and the courts, as well as the risk of crime and violence. With the rise of state capture, which was seen as a tool to control government through theft of public resources, notably SOEs, South Africa's approach toward the rule of law has shown to be ineffectual over time (Kotze, 2018).

vi. Control of Corruption (CC)

This assesses how much public power is abused for personal benefit, including petty and grand corruption, as well as ‘state capture’ by elites and business interests. The problem of ‘state capture’ in South Africa is an example of unconstitutional action. Commercial interests have used illegal measures to obtain influence over public representatives or state officials in order to persuade them to make decisions that benefit both parties while risking the public interest and the constitutional integrity of state institutions (Kotze, 2018). As a result, the Judicial Commission of Inquiry was constituted to look into allegations of government control, corruption, and fraud including state organs (Our Mandate, 2021).

2.4 Other Governance Issues in South Africa

2.4.1 Strategic Sourcing in Public Procurement as Access Points for Corruption

According to the Chartered Institute of Purchasing and Supply (2012, p.6), strategic sourcing involves organisational procurement and supply-management activities which discover, develop, qualify, and engage suppliers that bring maximum value to the buyer's organisation. It divides strategic sourcing into four categories, i.e., demand management, supplier management, total costs of ownership, and sustainability. SOEs in South Africa

are at the forefront of the supply chain of goods and services in the country. This is the area where corruption took place because of the scope of procurement activity and bigger spend involved for SOEs in South Africa, which is why it attracted corruption Kelly et al (2016). Furthermore, public procurement corruption is pervasive in developed countries (Kelly et al., 2016), and opportunism exacerbates it. Corruption, they claim, can occur at any stage of the public procurement process, including the needs assessment phase (demand determination), the preparation phase (project design and bid document preparation), the contractor selection and award stage, the contract implementation stage, and the final accounting and audit stage (Popescu et al., 2016). Corruption in public procurement takes many forms, including unmet needs investments, phony bidding processes that look like bribery competitions, exaggerated pricing, and low-quality goods or services, to name a few.

Beuve et al. (2018) define government opportunism as the ability of governments to amend laws using standard administrative capacities in order to obtain quasi-rents from investors, incentivising politicians to act opportunistically. They go on to explain that government contracts are more prone to waste, corruption, or opportunism, as well as political risk, which is why they are more rigorous than private sector contracts (Beuve et al., 2018). According to Baltrunaite (2020), government procurement is predicted to account for 10%–25% of global GDP, making it a significant policy result. This is because public procurement affects a large portion of the economy and is linked to government spending, which is a good indication of government efficiency (Fourie & Malan, 2020). As a result, an appealing possibility for exploitation emerges, primarily in the form of corruption.

Baltrunaite (2020) further claims that there is substantial proof that corporate money buys preferential treatment in procurement auctions, resulting in their being given public contracts. This asks the question whether political clout can be bought with cash. According to Krivinsh and Vilks (2013, p. 236), public procurement is an area particularly vulnerable to corruption, and it cannot be considered separately from overall levels of

corruption. Because of the high stakes and strong ties between politicians and the public sector, public procurement is prone to unethical business practices such as conflict of interest, favouritism, and corruption (Krivinsh & Vilks, 2013). Moreover, interference is frequently conflated with intervention, interface, and insulation, as it was presented in the Public Protector's '. For the claims of mismanagement, flaws in corporate governance, abuse of power, and the SABC's improper recruitment processes of that time, COO Mr. Hlaudi Motsoeneng was investigated by the Public Protector (Kanyane & Saussi, 2015).

2.4.2 Role Players

Political–economic fusion is most common in government procurement, according to Mugadza (2018: p.8). Politicians are the ones who initiate procurement and have the power to approve or reject contracts that they encounter. Furthermore, because the chain of persons participating in public procurement is frequently long (administrative officials, lawmakers, bidders, subcontractors, agents, consultants, business partners, and managers), the duty and blame are dispersed. The argument could be extended to SOEs because the resources in these SOEs are effectively public money and likely to attract the interference of politicians.

2.4.3 Government Investment in SOEs

State-owned enterprises are considered an engine of the South African economy as they provide essential infrastructural services, such as transportation, energy, and water, driving economic growth while ensuring equal access to quality services (Marimuthu, 2020)

However, there has recently been much negative press about the poor performance of SOEs. These companies are frequently in financial jeopardy and unable to meet their obligations (Marimuthu, 2020). There are two traditional explanations for the existence of SOEs, according to Cuervo-Cazurra et al. (2014): an economic one focused on the solution of market imperfections, and a political one centred on the ideology and political

strategy of government officials regarding private ownership of particular productive assets (Cuervo-Cazurra et al., 2014). Because of the poor performance of South African SOEs, the government has intervened in the form of grants, money, rebates, and subsidies. In spite of improved government intervention, the economic performance of many SOEs was not favourable, and they appear to be in a state of endless economic hardship, dependent on government handouts for existence.

Additionally, it has been stated that government utilised more than ZAR450 billion in 2017, which has increased from 54.4% to 64.5% spent on them by SOEs, putting additional strain on state resources. Eskom received ZAR170 billion in increased guarantees in 2017–2018; the Passenger Rail Agency of South Africa received ZAR53 billion in increased guarantees; the South African National Roads Agency Limited received ZAR53 billion in increased guarantees South African Airways received ZAR19.1 billion in increased guarantees, and the South African Post Office received ZAR4.4 billion in increased guarantees. This suggests that these companies are unable by themselves to generate a profit (Marimuthu, 2020).

According to Renaud et al. (2020), most of the country's electricity is generated by a huge, aging coal-fired power fleet. This fleet is a major source of carbon emissions in the country, has high operating and maintenance costs, and has recently demonstrated its inability to meet energy demand on a consistent basis. The lack of political will, restrictions imposed by regulations in the energy sector, and grid capacity issues are considered the three overarching barriers having an impact on scaling up the energy in South Africa.

Recently, political will and policy about the energy plan has also affected the industrial growth adversely. South Africa's market uncertainty has been exacerbated by lagging behind in the implementation of the country's Integrated Resource Plan (IRP) and the country's procurement process in terms of renewable energy. The industry experts cited the impact of the energy crisis in South Africa as the biggest contributor to its inability

to establish a local manufacturing industry and skills base, which could have a negative impact on industry growth. It has also had an effect on its ability to overcome legislative barriers to the development and integration of renewable energy projects (Renaud et al., 2020).

Lastly, there are suggestion that these plans fell through for a variety of political reasons. The South African attitude toward this electricity is positive; however, it was deemed an extremely expensive project for South Africa to undertake with a limited budget. (Dikgang, 2018).

2.4.4 Financial Implications

According to Stobierski (2020), financial KPIs (key performance indicators) are metrics that organisations use to track, measure, and analyse the financial health of the company. Financial measurements are used to assess the performance of the supply chain, according to Dearing and Foster (2019, p. 230), and they can help the organisation to ensure that it is using its resources efficiently to fulfil market demand. They also suggested the Supply Chain Operations Reference Model (SCOR) model, which details supply chain costs for each level of the core supply chain processes that it includes overall: value at risk, total costs to serve, costs of goods sold and return on supply chain fixed assets.

2.5 Uniqueness of the Study

All of the research mentioned above suggests that corruption in its different forms, as much as it a global phenomenon, is one of the most detrimental and prevalent in the South African economy with a far-reaching impact. Furthermore, governance can play a significant role in the effective functioning of the society and the state. It is therefore critical for government to strengthen the governance system to ensure effective functioning of the organs of the state. This study uses the World Governance Indicators as proxy for the measurement of the extent of corruption in the country and seeks to access whether a correlation exist between them and the financial performance of SOEs in South Africa.

2.6 Summary

It is just as vital to understand why governance is importance to effective functioning of SOEs in country as it is to why it has an impact on the economy. Therefore, it necessitates the investigation of the nexus between the World Governance Indicators' scores and the financial performance of SOEs in South Africa to correct the adverse effect that corruption has contributed to the country.

Chapter 3: Research Methodology

3.1 Introduction

This chapter explains the research techniques that were used in this study. A research methodology is defined as a method for collation, systematisation, treatment and analysis of data for a study (Marczyk & Festinger, 2005). It describes how a researcher creates a study in a methodical way in order to get accurate outcomes that will achieve the objectives of the study It also describes what data will be sourced, where it will be obtained, and lastly, how this data will be processed and evaluated (Jansen & Warren, 2020). The two broad approaches to data gathering and interpretation established while dealing with research are qualitative and quantitative research methods. The outline of this section is as follows. Section 3.2 discusses the research design. Section 3.3 discusses the target population. Section 3.4 discusses the sampling strategies. Section 3.5 discusses the data collection method. Section 3.6 discusses data analysis. Sections 3.7 looks at limitations of the study. Section 3.8 examines data measurement, Section 3.9 looks at ethical considerations, and Section 3.10 summarises the chapter.

3.2 Research Design

Quantitative research is defined by Marczyk & Festinger (2005),as involving ‘the use of computational, statistical, and mathematical tools to derive results.. According to Burns and Grove (1997, p. 40), quantitative research is the process of acquiring knowledge about the world in a formal, objective, and methodical manner. It requires the researcher to understand the type of data to be collected and to analyse it using systematic tools and processes such as ‘independent sample t-test, correlated t-tests and regression analysis’ to extract useful information from the data (SIS International Research, 2020). This study is quantitative in nature and uses a regression tool to establish the relationship between the variables.

3.3 Target Population.

For the purposes of this study, the population was the State-Owned Entities in South Africa, picked from a list of over 100 entities across the country. The Companies Act, 71 of 2008 distinguishes between two types of businesses: profit and non-profit. This classification effectively classifies state-owned corporations as either Schedule 2 or 3 corporations incorporated for the purpose of financial gain for their owners or not (PWC, 2012). A sample of Schedule 2 and Schedule 3 SOEs were purposefully chosen by the researcher. The SOEs chosen for the study are listed below:

The following Schedule 2 SOEs selected are as follows: Airports Company South Africa, Air Traffic and Navigation Services Company, Alexkor Limited, Armaments Corporation of South Africa, Broadband Infrastructure Company (Pty) Ltd, CEF Pty (Ltd), DENEL, Development Bank of Southern Africa, ESKOM, Industrial Development Corporation of South Africa Limited, Land and Agricultural Bank of South Africa, SA Broadcasting Corporation Limited, SA Forestry Company Limited, SA Nuclear Energy Corporation, SA Post Office Limited, Telkom SA Limited, Trans-Caledon Tunnel Authority, Transnet Limited.

The Schedule 3 SOEs selected are as follows**:** Mine Health & Safety Council, MISA, Railway Safety Regulator, Road Accident Fund, Road Traffic Infringement Agency (RTIA), Road Traffic Management Corporation, SA Civil Aviation Authority, South African Weather Service, South African National Parks, South African National Space Agency, SA Revenue Service, National Metrology Institute of South Africa, Private Security Industry Regulatory Authority, Council for Geoscience, Competition Commission, Construction Industry Development Board, FIC, FPB, NNR, Ports Regulator of South Africa, Mhlathuze Water, Productivity SA, and Robben Island

3.4 Sampling Strategies

According to Polit and Hungler (1995), sampling is the process of selecting a subset of a population to represent the entire population in order to obtain information about an phenomenon of interest. They also state that a sample is a subset of the population that is chosen to participate in a study. Two sampling methods were explained: one yields

probability samples in which each respondent's selection is guaranteed, and the other yields non-probability samples with an unknown probability of selection (Polit & Hungler 1995, p. 279). The SOEs for the study were chosen using a purposive sampling design.

3.5 Data Collection Methods

A ‘data gathering method’, according to Kawulich (2005), ‘is a process of collecting data from various sources to find answers to the research problem’. The view of Burns and Grove (1997, p. 383) aligns with Kawulich in that it entails a systemic way of gathering information, which is relevant to the research purpose or questions. Data collected from the Global Governance Indicators was downloaded from the website of the World Bank and the financial performance of state-owned enterprises (SOEs) was collected from the published financial statements of these SOEs. The study was conducted over a period of five years from 2016 to 2020.

3.5.1 Validity and Reliability

The researcher offers raw data to ensure that the results can be verified (confirmability), and the researcher ensures validity by following the proper channels throughout the procedure. For the SOEs, this includes using audited financial statements.

3.5.2 Variables and Estimation.

The aim of this study is to assess whether a correlation exist between the World Governance Indicators’ scores on corruption for South Africa and the financial performance of SOEs in the country. This is because the SOEs are a directly measurable illustration of government trying to run a business. World Governance Indicators are:

1. Voice and accountability,
2. Political instability and absence of violence .
3. Government effectiveness (GE),
4. Regulatory quality,
5. Rule of law, and
6. Control of corruption.

The assumption is that performance of SOEs is a function of the extent of corruption in the country (proxied by the world governance indicators) while controlling for other factors. The model for testing this relationship is expressed as follows:

$$PERit = \alpha_{it} + \beta_1 SOE_GOV_{it-1} + \sum_{i=1}^{n} \delta_i X_{it} + \varepsilon_{it}$$

With PER_{it} the performance measure of an SOE I for year t (ROA, REVENU and net profit are proxies for performance); SOE_GOV_{it} are world governance indicator of country I for year t, and X_{it} is a vector of control variables represented by total assets to proxy the size and the age of the SOE. The rationale for the choice of the variables has already been explained and will therefore not be repeated.

3.6 Data Analysis

Data analysis is 'the systematic organisation and synthesis of the research data and the testing of research hypotheses, using those data' (Polit & Hungler, 1995, p. 639). It also entails 'categorising, ordering, manipulating and summarising the data and describing them in meaningful terms' (Marczyk, & Festinger, 2005). Normal correlation analysis is defined as a method of statistical evaluation used to study the strength of a relationship between two numerically measured, continuous variables. The information was gathered from SOE financial statements as well as from the World Bank's world governance indicators. EViews econometrics software was used to analyse the data.

3.6 Limitations of the Study

This study is limited to Schedule 2 and Schedule 3 SOEs. The results could be different had we used all the SOEs in the country. The challenge was the availability of financial statements of some of the SOEs on the companies' websites.

3.7 Data Measurement

3.7.1 Validity

Polit and Hungler (1995, p. 53) define validity as 'the extent to which the instrument measures what it is supposed to measure'. The researcher was primarily concerned with

content validity, which refers to the precision with which an instrument measures the variables under consideration. As a result, content validity was concerned with how accurately the information obtained was able to elicit the desired information. The content validity of the information was tested by cross-referencing it with company reports from their websites.

3.7.2 Reliability

The precision and accuracy of the instrument are related to its reliability. The instrument should produce similar results when used on a similar group of respondents in a similar context (Cohen et al, 2000, p. 117). The reliability of company information (SOEs) obtained from secondary sources is ensured by careful sourcing. The fact that SOEs are required to publish audited financial statements adds to the credibility of the data.

3.8 Ethical Considerations

Ethical issues observed in a study may include using factual and verified information as obtained from secondary sources to establish the relationship between the variables being studied. This study used secondary data that was available publicly and therefore there was no potential for any ethical risk. Nevertheless, the study was conducted in line with all ethical requirement of WBS and a formal ethics waver was applied for. All information submitted was utilised solely for this research study to complete the degree requirements as set forth by the University of the Witwatersrand.

Chapter 4: Presentation Results

4.1 Introduction

Chapter 4 presents the data analysis of the project. For the purposes of this study, a sample of Schedule 2 and Schedule 3 State-Owned Entities (SOEs) were chosen based on their size, age, budget spend, cases of governance-related misdeeds in the public domain. The data were analysed using EViews econometrics software. The aim of this study is to investigate how levels of country corruption, proxied by the world governance indicators, influence the performance of State-Owned Entities in South Africa. This is because the SOEs are a directly measurable illustration of government trying to run a business. The research objective of the study is as follows:

To investigate the effect of world governance indicators scores on corruption in South Africa and the financial performance of SOEs in the country.

The ensuing sections present the descriptive statistical analysis results.

4.2 Descriptive Statistics

This section presents the summary statistics for the financial data of the sampled South African SOEs for the period between 2016 and 2020 when corruption was prevalent. This segment outlines the descriptive statistics for financial key performance indicators (KPIs) of SOEs that include revenue, net profit, and return-on-asset. In addition, this section presents the descriptive statistics for the world governance indicators (WGIs): voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption, asset, and age.

4.2.1 Financial Key Performance Indicators (KPIs) of SOEs

This segment presents the descriptive statistics for the financial KPIs of SOEs. The means and standard deviations of these indicators are presented in Table 1.

Table 1: Financial KPIs of SOEs

KPI	Mean	Standard Deviation
Net profit (NP)	6.125	2.075
Revenue (REV)	6.684	2.079
Return-on-asset (ROA)	1.362	0.604

Source: Financial statements of various SOEs

Table 1 show the means and standard deviations of the financial KPIs revenue, net profit, and return-on-asset. Net profit has a mean of 6.125 and a standard deviation of 2.075, which is above 1. This standard deviation above 1 is an indication that the variable net profit for most SOEs is dispersed around the mean. In addition, revenue has a mean of 6.684 and a standard deviation of 2.079, which is above 1. Similarly, this standard deviation above 1 is an indication that the variable revenue for most SOEs is dispersed around mean. Furthermore, ROA has a mean of 1.362 and a standard deviation of 0.604, which is below 1. This standard deviation below 1 is an indication that the variable ROA for most SOEs is clustered around the mean.

4.2.2 World Governance Indicators (WGIs)

This section contains the descriptive statistics for the world governance indicators. The means and standard deviations of these indicators are presented in Table 2.

Table 2: World Governance Indicators (WGIs)

WGI	Mean	Standard Deviation
Voice and accountability	0.650	0.024
Political stability and absence of violence	-0.230	0.048
Government effectiveness (GEFF)	0.319	0.028
Regulatory quality (RQUAL)	0.187	0.038
Rule of law (RLAW)	-0.044	0.084
Control of corruption (CCUR)	0.038	0.059
Asset	7.322	1.870
Age	1.508	0.257

Source: EViews,

Table 2 show the means and standard deviations of the WGIs voice and accountability, political stability and absence of violence, government effectiveness, regulator quality, rule of law, and control of corruption, asset, and age. Voice and accountability has a mean of 0.650 while political stability and absence of violence has a mean of -0.230. In addition, government effectiveness has a mean of 0.319 while regulatory quality has a mean of 0.187. Furthermore, rule of law has a mean of -0.044 while control of corruption has a mean of 0.038. Lastly, asset has a mean of 7.322 while age has a mean of 1.508. The standard deviations of these WGI variables are all below 1 and this shows that the WGI variables are clustered around the mean.

4.3 Regression Analysis

This section contains the regression analysis results. The panel least squares method was used to investigate how levels of country corruption, proxied by the world governance indicators, influences the performance of SOEs in South Africa. This is because the SOEs are a directly measurable illustration of government trying to run a business.

4.3.1 Effect of WGIs on Net Profit (NP)

The effect of the WGIs on NP was investigated using this panel regression model:

$Y_{it} = \alpha + \beta X_{it} + \psi_{it}$

Where:

Y is the dependent variable net profit (NP)

X is the independent variable, in this case the WGIs

i and t are indices for firms, in this case SOEs and time

ψ is the error term.

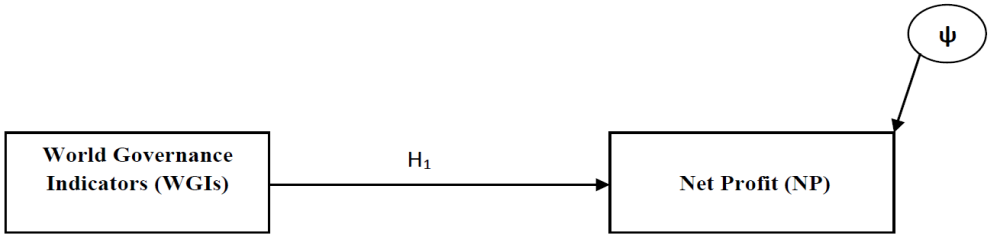


Figure 1 Effect of the WGIs on Net Profit

Source: World Bank, 2021

Figure 1 shows the effect of the WGIs on net profit (NP) and H_1 represents a group of hypotheses that were tested to measure this effect.

According to the model summary in Table 3, the effects of the WGIs rule of law (RLAW), control of corruption (CCUR), asset, and age on net profit (NP) were significant as the p-values are less than 0.05. However, the effects of the other WGIs government effectiveness (GEFF), regulatory quality (RQUAL), and the constant or base model were not significant as the p-value is greater than 0.05. In addition, the model shows a very strong positive relationship with an R Square value of 0.936761 between the dependent variable NP and the WGI independent variables. The adjusted R Square value of 0.929464 shows that 92.9% of NP is due to the WGIs variables.

Furthermore, the F-statistic shows that the panel regression model is statistically significant because the p-value is less than 0.001 and the F-value of 128.3786 is very high. The model coefficients show that RLAW and age have a negative relationship with NP while CCUR and asset have a positive relationship with NP. However, the model coefficients show that GEFF and RQUAL have a negative relationship with NP.

4.3.2 Effect of WGIs on Revenue (REV)

Similarly, the effect of the WGIs on REV was investigated using this panel regression model:

$Y_{it} = \alpha + \beta X_{it} + \psi_{it}$

Where:

Y is the dependent variable revenue (REV)

X is the independent variable in this case the WGIs

i and t are indices for firms in this case SOEs and time

ψ is the error term.

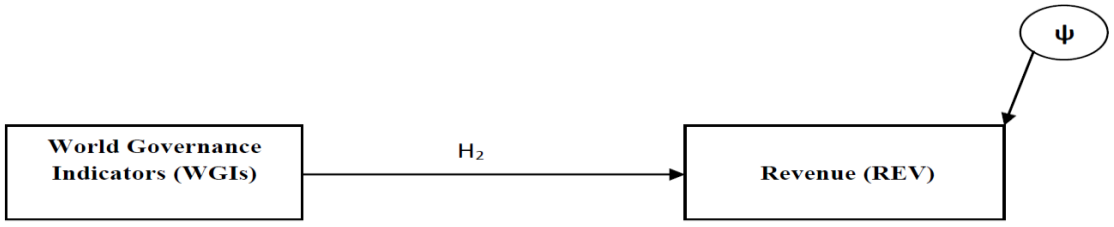


Figure 2 Effect of the WGIs on Revenue

Source: EViews

Figure 2 shows the effect of the WGIs on revenue (REV) and H_2 represents a group of hypotheses that were tested to measure this effect.

According to the model summary in Table 4, the effects of the WGIs asset and age on revenue (REV) are significant as the p-values are less than 0.05. However, the effects of the other WGIs rule of law (RLAW), control of corruption (CCUR), government effectiveness (GEFF), regulator quality (RQUAL), and the constant or base model are not significant as the p-value is greater than 0.05. In addition, the model shows a very strong positive relationship with an R Square value of 0.942621 between the dependent variable REV and the WGI independent variables. The adjusted R Square value of 0.938150 shows that 93.8% of REV is due to the WGIs variables.

However, the F-statistic shows that the panel regression model is statistically significant because the p-value is less than 0.001 and the F-value of 210.8273 is very high. The model coefficients show that GEFF, RQUAL, CCUR and age have a negative relationship with REV while RLAW and asset have a positive relationship with REV.

4.3.3 Effect of WGIs on Net Profit (ROA)

Lastly, the effect of the WGIs on REV was investigated using this panel regression model:

$Y_{it} = \alpha + \beta X_{it} + \psi_{it}$

Where:

Y is the dependent variable return on asset (ROA)

X is the independent variable, in this case the WGIs

i and t are indices for firms, in this case SOEs and time

ψ is the error term.

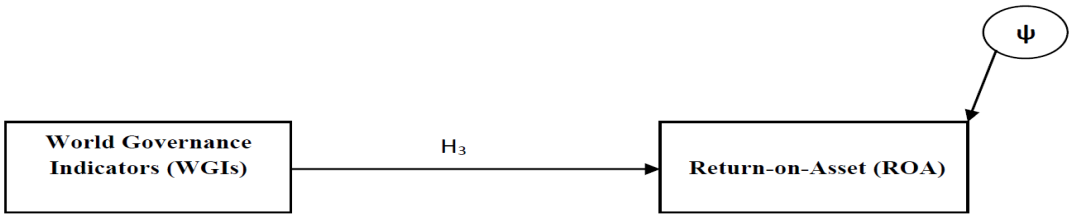


Figure 3 Effect of the WGIs on Return on Asset

Source: World Bank, 2021

Figure 3 shows the effect of the WGIs on return on asset (ROA) and H_3 represents a group of hypotheses that were tested to measure this effect.

According to the model summary in Table 5, the effects of the WGIs age on return on asset (ROA) are significant as the p-value is less than 0.05. However, the effects of the other WGIs are not significant as the p-value is greater than 0.05. More so, the model shows a very weak positive relationship with an R Square value of only 0.321035 between the dependent variable ROA and the WGI independent variables. The adjusted R Square value of 0.268129 shows that only 26.8% of ROA is due to the WGIs variables.

However, the F-statistic shows that the panel regression model is statistically significant because the p-value is less than 0.001 even though the F-value of 6.067996 is not high. The model coefficients show that age OCCUR, RQUAL, and GEFF have a negative relationship with ROA while RLAW and asset have a positive relationship with ROA.

Table 6 shows the correlation matrix. On close analysis it can be observed that there is no major issue of autocorrelation between the variables.

Table 6 Correlation Matrix

Correlation Probability	NP	REV	ROA	VACC	PSTAB	GEFF	RQUAL	RLAW	CCUR	ASSET	AGE
NP	1.000000										
REV	0.941480	1.000000									
	0.0000	-----									
ROA	0.343225	0.520048	1.000000								
	0.0078	0.0000	-----								
VACC	0.033345	-0.076817	-0.024353	1.000000							
	0.8020	0.5631	0.8547	-----							
PSTAB	-0.031590	-0.009988	0.062116	0.160321	1.000000						
	0.8123	0.9402	0.6402	0.2251	-----						
GEFF	0.046439	0.009291	-0.138428	-0.266403	-0.194846	1.000000					
	0.7269	0.9443	0.2958	0.0414	0.1392	-----					
RQUAL	-0.080830	-0.053074	0.062111	0.273795	0.084532	-0.800184	1.000000				
	0.5428	0.6897	0.6403	0.0359	0.5244	0.0000	-----				
RLAW	-0.088568	-0.022565	0.049851	-0.121058	0.788831	-0.286282	0.463075	1.000000			
	0.5047	0.8653	0.7077	0.3611	0.0000	0.0279	0.0002	-----			
CCUR	-0.028153	-0.076174	-0.060470	0.499778	0.667472	0.130196	0.178133	0.616616	1.000000		
	0.8324	0.5664	0.6491	0.0001	0.0000	0.3257	0.1771	0.0000	-----		
ASSET	0.952342	0.961530	0.265408	-0.078878	-0.031252	0.055007	-0.079885	-0.041503	-0.066537	1.000000	
	0.0000	0.0000	0.0422	0.5526	0.8142	0.6790	0.5475	0.7550	0.6166	-----	
AGE	-0.397404	-0.425625	-0.559935	0.119049	0.003930	-0.002851	0.068443	0.018386	0.110136	-0.300356	1.000000
	0.0018	0.0008	0.0000	0.3691	0.9764	0.9829	0.6065	0.8901	0.4063	0.0208	-----

Source: EViews, 2022

Note: NP is the net profit of SOE I for the year t, while Rev is Revenue SOE I for the year t. Also, (ROA) is the Return on Asset of SOE I for the year t, Size (total Asset) of SOE I for the year t, and Age of SOE I for the year t, as collected from the published annual report of the said SOE. RLaw is the rule of law score, (VAcc) is Voice and Accountability, (Pstab) is Political Stability, (Geff) is Government Effectiveness, (Rqual) is Regulatory Quality, (Rlaw) is Rule of law, and (Ccur) is Control of corruption of South Africa, as measured by the world governance indicator.

4.4 Regression Analysis for Performance Indicators Models Results.

Table 7 presents the output of the OLS regression analysis used in the study. The panel least squares method was used to investigate how levels of country corruption, proxied by the world governance indicators, influences the performance of SOEs in South Africa. This is because the SOEs are a directly measurable illustration of government trying to run a business.

Table 7 Regression Analysis for Performance Indicators for SOEs Against World Governance Indicators

	Net Profit	Revenue	ROA
Governance Effectiveness	-7.2563	-2.0164	-2.0164
Regulatory Quality	-1.5248	-0.3202	-0.3202
Rule of Law	**-3.9769[a]**	0.4069	0.4069
Control of Corruption	**5.6706[a]**	-0.3884	-0.3884
Asset	**0.9203[a]**	1.0392[a]	**0.0392[a]**
Age	**-1.1585[a]**	-1.2125[a]	**-**1.2125[a]
Adjusted R-square	0.929464	0.93815	0.268129

Source: World Bank, 2021

a, b, c standing for significant at 1%, 5% & 10%

4.5 Conclusion

Chapter 4 outlined the data analysis results of this study. According to the results, the effects of the WGIs rule of law (RLAW), control of corruption (CCUR), asset, and age on net profit (NP) were significant as the p-values are less than 0.05. However, the effects of the other WGIs government effectiveness (GEFF), regulatory quality (RQUAL), and the constant or base model are not significant as the p-value is greater than 0.05. In addition, the effects of the WGIs asset and age on revenue (REV) are significant as the p-values are less than 0.05. However, the effects of the other WGIs rule of law (RLAW), control of corruption (CCUR), government effectiveness (GEFF), regulatory quality (RQUAL) are not significant as the p-value is greater than 0.05. Further, the effects of the WGI age on return on asset (ROA) are significant as the p-value is less than 0.05. However, the effects of the other WGIs are not significant as the p-values are greater than 0.05. Chapter 5 presents the discussion of the results of this research, based on the objectives and propositions made at the start of the research project.

Chapter 5: Discussion of Results

5.1 Introduction

The chosen variables for the measures of the performance indicators (dependent variables) of SOEs are Revenue, Net Profit, and ROA against the world governance indicators, which are i. voice and accountability, ii. political instability and absence of violence, iii government effectiveness (GE), iv. regulatory quality, v. rule of law, and vi. control of corruption. In this study, the voice and accountability and political stability gave a unit trimatrix meaning did not run; hence, they are not included.

5.1.1 Net Profit Analysis

Table 3: Summary-I, provides a summary of the effect of WGIs rule of law (RLAW), regulatory quality, control of corruption (CCUR), asset, and age on net profit (NP) output. The effect was investigated using this panel regression

5.1.1.1 Effect of WGIs on Net Profit (NP)

The effect of the WGIs on NP was investigated using this panel regression model:

$Y_{it} = \alpha + \beta X_{it} + \psi_{it}$

Where:

Y is the dependent variable net profit (NP)

X is the independent variable, in this case the WGIs

i and t are indices for firms, in this case SOEs and time

ψ is the error term.

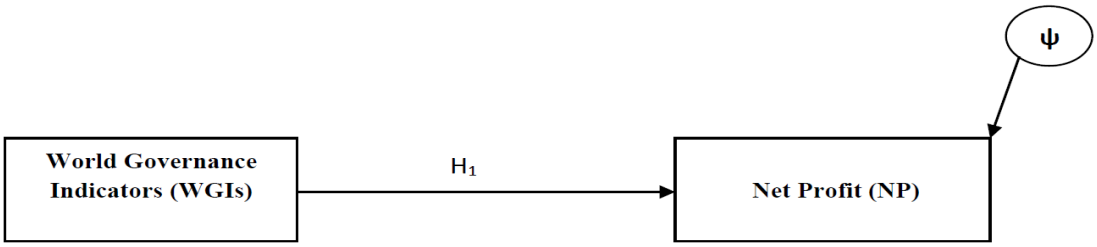


Figure 4 Effect of the WGIs on Net Profit

Source: Author

Figure 4 shows the effect of the WGIs on net profit (NP) and H_1 represents a group of hypotheses that were tested to measure this effect.

5.1.1.2 Net Profit and the Rule of Law

Rule of law represents agents' assessments of how much they trust and adhere to society's laws, such as contract enforcement, property rights, the police, and the courts, as well as the risk of crime and violence. This is based on the notion of governance that law is and should be applied equally both to government and citizens. It is expected that companies which operate in an environment where the rule of law is upheld will have better prospects than those that do not. This is explained by the rule of law being significant at 1% in explaining the net profit; however, at the negative relationship. Intuitively, it would have been expected that the rule of law will have a positive effect on the net profit of a company. In the case of South Africa, with the rise of state capture, which has been a tool to control government through the theft of public resources, notably SOEs, South Africa's approach toward the rule of law has shown to be ineffectual over time (Kotze, 2018).The SOEs are arguably the biggest drivers of public procurement in the country. Unfortunately, the State Capture Commission on corruption in these SOEs has also shown their vulnerability (Kotze, 2018).

Nwabuzor (2005) argues that all countries that are experiencing the scourge of corruption need to strengthen the rule of law as this is expected to yield positive outcomes for the

development of a country. Cross (2002) agrees that the rule of law is actually one of the determinants of economic growth. Also, ZHANG & LIU2(2021), concur with other scholars in that rule of law has an impact on the amount of foreign direct investment that a country can attract although this is inconsistent in various parts of the world.. With SOEs as the biggest drivers of economic activity in the country, their governance as represented by the rule of law plays an enormously positive role on the company bottom line through ensuring adherence to law equally by both society and government.

On the other hand, in the context of South African SOEs, adherence to the rule of law results in negative net profit for the SOEs as is witnessed in most of the biggest SOEs, to name a few: Eskom, SABC and SAA. This is because SOEs operate in a very different legal environment, which may explain why the rule of law has a negative impact on the net profit of SOEs. Indeed, SOEs have a developmental mandate. As a result, their goal is not only to generate profit, but also to achieve goals imposed by the acts that created them. For example, the South African Broadcasting Corporation (SABC), which has a mandate to educate and entertain, finds itself having to run programmes that are not profitable but must comply owing to its developmental mandate, which affects their profits. They may be limited in their ability to source shows that will increase international viewership, attract marketing advertisers, and generate profit.

Phakathi (2015) contends that the SABC is both a state-owned entity and a public broadcaster (Phakathi, 2015). In theory, this means that money is coming from both the general public and the government.. It also implies that, while the state has some control over the SABC, it has no say over its content. He states that the public broadcaster announced and put into effect a 90% local content policy. The SABC local content report backs up this point of view, stating that market dynamics in the local music and production industries influence the ability of SABC services to broadcast high levels of local content. The music industry, for example, does not always produce South African music consistently across all music formats. When it comes to television production, the cost of local content is typically much higher than that of international programmes. The SABC is under pressure to screen material that will attract audiences and revenue in an

environment where programming is primarily funded by advertising. This is the environment in which the SABC operates, and it seeks to demonstrate its commitment to broadcasting local content (SABC, 2002).

In a *Sunday Times* article by Ndenze (2017), the board chairman at the time, James Aguma, was quoted as agreeing that the SABC 90% local content policy is impacting public broadcaster profitability negatively since the commercial and flagship radio stations Metro FM 5FM and Goodhope FM, and the television channel SABC 3 all showed a decline in audience. The reasons for the underperformance in revenue were attributed to key factors such as a drop in advertisement (Ndenze, 2017). This is a good example of how following the rule of law, whether in terms of implementing developmental or policy mandates, has an inverse effect on the commercialization effect of the goods and services they provide. Thus, it has a negative impact on profitability, as in the case of SABC. Eskom is another case where the price of electricity is regulated and is not always changed in relation to the costs that the company is incurring, which must have a negative impact on their bottom line. The most recent court case occurred in December 2021, when the court ordered NERSA to make a decision on the 2022/23 tariff application owing to insufficient tariff increases protecting consumers and businesses (Muller, 2015).

According to Kanyane and Sausi (2015), another challenge that SOEs face is that private firms prefer to operate in the competitive environment created by the Companies Act. SOEs, on the other hand, find it difficult to compete with these private companies because they must operate within seemingly more rigid Public Finance Management Act No 1 of 1999 (PFMA) environments. Stringent PFMA standard operating protocols continue to hold back the competitiveness of SOEs. SAA, for example, finds it difficult to compete with private airlines on an equal footing. ‘The political decision becomes effective when the entity establishes its priorities, stating that the state wishes to expand trade relations with one of the African countries on the continent’ (Kanyane & Saussi, 2015). The entity is then obligated, regardless of profitability, to ensure the existence of a route that flies to the specific destination. Profit and socioeconomic development are at odds in this situation.

It could thus be concluded that, contrary to popular belief, the negative impact of the rule of law on the net profit of South African SOEs is a reflection of the regulatory environment in which the SOEs operate in the country.

5.1.1.3 Net Profit and Control of Corruption

According to Kotze (2018), corruption control is an evaluation of how much public authority is exploited for personal benefit, encompassing petty and grand corruption, as well as 'state takeover' by elites and economic interests. Baqwa (2001) indicates that corruption is prevalent in emerging and transitional economies, not because their people are different from others, but because the conditions are adverse. He explains that South Africa's new Constitution, passed in 1996, needed the country to implement an ethical, responsible, and democratic governing structure. This vow, however, was made against the historical backdrop of numerous self-governing entities united into one, at least some of which previously depended on centralised political leadership that intentionally attempted to hide government from scrutiny and monitoring. To address this legacy, in South Africa a number of legislative and administrative reforms were enacted.

This included, among others, portfolio committees, and legislative and administrative measures. Other targeted legislative and administrative measures include: the Auditor-General, the Public Protector (national parliamentary ombudsman), the Special Investigative Unit, the Investigating Directorate on Corruption in the office of the National Director of Public Prosecutions, the recently established Inspectors-General within certain state departments, including the military, police, and intelligence services, the passing of the Executive Members' Ethics Accreditation Act 82 of 1998 and members of Provincial Executive Councils (Cabinets). The Code requires a level of disclosure at least as extensive as that required of Members of Parliament, the Code of Conduct for Public Employees contained in Chapter M of the Public Service Regulations, which governs relationships with the legislature, executive, public, colleagues, as well as performance, personal conduct, and disclosure of private interests, the service contracts of heads of government departments, the Promotion of Access to Information Act 2 of 2000, which

applies to both the public and private sectors; and the Administrative Justice Act, 53 of 2002. The Public Finance Management Act, 29 of 1999 clarifies the responsibility of designated accounting officers for the management of public finances, and finally, public sector procurement reform is currently underway, with detailed anti-corruption mechanisms proposed in accordance with international best practices.

This is evident in the model, as the control of corruption is significant at 1% in explaining net profit with a positive association, denoting that when the control of corruption is effective in SOEs, a beneficial effect will be evident on corporate net profit. This is to be expected, as corruption control entails a mechanism put in place by legislation that governs SOEs and is intended to strengthen their governance. Existing research indicates that good governance has a positive impact on businesses (Brown & Caylor 2004; Suraya & Gantino 2022; Todorovic 2013). This extends to SOEs, since South African SOEs are required to comply with a number of acts and are monitored by a number of institutions that serve to strengthen the governance environment, which should result in a positive impact on SOE net profit.

This positive impact was evident before the advent of state capture, when SOEs were making a profit and were sustainable. However, as the charges of state capture grew in the public sector, Eskom spend amounted to R33 billion a year on pay for its 48 000-strong staff, up from 35 000 a decade before, while selling less energy. The remainder is spent on paying huge and frequently exaggerated fees to consultants and contractors because Eskom was ripe for theft (Hofstatter, 2018). As a result, over the last few years of Eskom's existence, Eskom has been making a loss and blackouts. Transnet was no different as it was implicated in locomotives and other tender corruption scandals, although making a profit but declining. SAA was one of the key subjects in the Commission of enquiry owing to allegations of corruption and loss making. It was eventually sold to private interests as the business was no longer sustainable (Bloomberg, 2022). According to Shava and Chamisa (2018), corruption typically occurs when disagreements arise between local governments and political office bearers as a

result of cadre deployment. During the race for municipal resources and authority, such disputes and irregularities in municipal operations support unscrupulous actions.

A Judicial Commission of Inquiry was formed to investigate allegations of government control, corruption, and fraud involving state organs (Our Mandate, 2021). This demonstrated that legal mechanisms are insufficient to address misdeeds in the public sector, as there is sufficient evidence from the government that South Africa is banding together to combat corruption in all of its forms through various means. Perhaps, it indicates the need to reconsider socioeconomic conditions since they do have an impact on corruption control (Baqwa, 2001).

5.1.1.4 Asset and Net Profit

The size of the company (total assets) is significant at 1% in explaining net profit with a positive association, which should be the case given that the more resources an organisation has, whether infrastructure or human capital, the more productive it is. Muller (2015) argues that, in order to stabilise the balance sheets of an institution such as Eskom, delayed maintenance and the use of diesel turbines to reduce loadshedding, non-collection of municipal debt, insufficient tariff increases to protect consumers and businesses, and empowerment requirements in the coal supply chain were contributing factors to Eskom's poor profitability. Although new power stations were added to boost capacity subsequent to the increase in demand because the entity supplies South Africa and beyond its borders, there is still a long way to go. The crisis worsens and the entity is struggling financially.

5.1.1.5 Age and Net Profit

The age of the company is significant at 1% in explaining the net profit, but with a negative association. Why is it that the age of the firm is negatively affecting the net profit when the contrary would have been expected ?. The situation should be that the bigger and older the SOE is, the better the returns should be, as the company would have fine-tuned its skills and accumulated resources that would result in efficient production. However, the situation is different: the older they get, the more they struggle and they end up in need of government bailouts owing to resource leakage because of corruption. This

phenomenon is strong evidence of the effect of corruption. It means that they have fine-tuned the means of corruption, for example, at ESKOM and SABC, which are the largest and oldest monopolies protected by government but which are still struggling to survive after the advent of corruption cases and state capture.

5.2.1 Asset and Revenue

Table 3: Summary-II, provides a summary of the effect if WGIs, asset and age on revenue (REV) output and effect was investigated using this panel regression

5.2.1.1 Effect of WGIs on Revenue (REV)

Similarly, the effect of the WGIs on REV was investigated using this panel regression model:

$Y_{it} = \alpha + \beta X_{it} + \psi_{it}$

Where:

Y is the dependent variable revenue (REV)

X is the independent variable, in this case the WGIs

i and t are indices for firms, in this case SOEs and time

ψ is the error term.

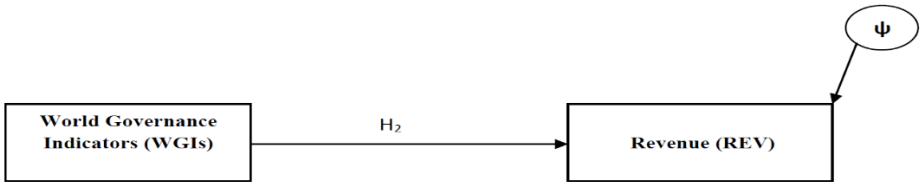


Figure 5 Effect of the WGIs on Revenue

Source: Author

Figure 5 shows the effect of the WGIs on revenue (REV) and H_2 represents a group of hypotheses that were tested to measure this effect.

5.2.1.2 Asset and Revenue

The model demonstrated that the revenue model is not affected by the world governance indicators but rather by the performance indicators of the company, i.e., size (asset) and age. The size (asset) of the SOEs is significant at 1% in explaining the revenue with a positive relationship denoting that the bigger the asset is, the higher the company's revenue will be. This is expected since the output of any organisation is achieved by assets, and the larger the asset is, the more the organisation should be capable of generating more revenue; however, for most South African SOEs, they are struggling owing to inefficiencies. In the cases of Eskom, SAA and SABC, amongst other cited challenges were rife corruption and state capture. For Eskom especially, corruption has been mentioned as an important reason why the coal plants at Medupi and Kusile are not generating electricity as promised, resulting in catastrophic blackouts in South Africa (Tshidavhu & Khatleli, 2020), while for SAA poor business models are indicated through which they were making a loss on international flights (Muller, 2015).This demonstrates that the assets of the SOEs in South Africa are significant in explaining revenue generation and that they are capable of generating more revenue.

5.2.1.3 Age and Revenue

The age is significant at 1% in explaining the revenue with a negative relationship denoting that the older the company is, the higher the adverse impact on revenue, e.g., the bigger struggling government monopolies like Eskom, SAA and SABC always having to be bailed out by government, since the older and bigger the more they have perfected corrupt methods/strategies. The case should be the older they get, the better the company should be as it would have perfected its production methods and honed its skills for the company to do better. This clearly highlights the persistent problem in SOEs of lost resources, which may be explained in terms of the stealing or corruption happening in SOEs, affecting productivity and profitability of these organisations, as reported in the Commission of Enquiry. In other instances, it is argued that poor business models and red tape are also contributing factors to failing SOEs (Muller, 2015). This is supported by

the model as it is very stable, demonstrated by the adjusted R Square of 93%. The overall model is statistically significant, as demonstrated by Prob (F-statistics) is 0.000000%.

5.3.1 Age and Return on Asset

According to the model summary III in Table 3, which provides the effect of WGIs age on return on asset (ROA) output, the effect was investigated using this panel regression.

5.3.1.1 Effect of WGIs on Return on Asset (ROA)

Lastly, the effect of the WGIs on REV was investigated using this panel regression model:

$Y_{it} = \alpha + \beta X_{it} + \psi_{it}$

Where:

Y is the dependent variable return on asset (ROA)

X is the independent variable, in this case the WGIs

i and t are indices for firms, in this case SOEs and time

ψ is the error term.

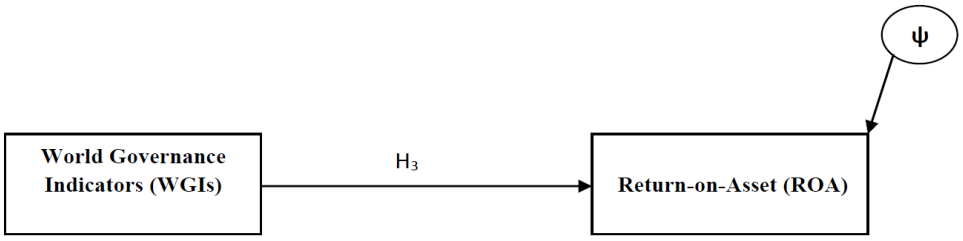


Figure 6 Effect of the WGIs on Return on Asset

Source: Author

Figure 6 shows the effect of the WGIs on return on asset (ROA) and H_3 represents a group of hypotheses that were tested to measure this effect.

5.3.1.2 Age and Return on Asset

The model demonstrated that the return-on-asset model is not affected by the world governance indicators but rather by the performance indicators of the company, i.e., age. This is probably because ROA entails the ability of the firm utilising its assets efficiently. The age is also significant at 1% in explaining the return on asset with a negative relationship denoting that the older the company is, the higher the inverse impact is on the return on asset. e.g., the delays bring the nuclear power station closer to the edge of its current operating licence, which expires in 2024 for Unit 1 and 2025 for Unit 2 (Planting, 2022). This is another problematic phenomenon highlighted by the inverse relationship of the age and return-on-asset variables in that the expectation is that as the company gets older the more efficient it should be in its operations because it would have fine-tuned its production methods and honed the skills of its key employees. This inverse relationship may be explained by stealing or corruption happening in SOEs which affects productivity and profitability of organisations or an indication that of the low investment in the maintenance of asset for the company, e.g., the case of ESKOM which is one of the government's biggest monopolies but which is unable to meet the market demand owing to older and more inefficient power stations.

This is an example of poor maintenance of assets, which affects efficiency. The model is very stable ,as demonstrated by the adjusted R Square of 26%. The overall model is statistically significant, as demonstrated by Prob (F-statistics), is 0.0031%. The effect is also adding up, especially for South African companies. Efficiency is what the country is struggling with, especially as a developing economy, in terms of technology infrastructure, constraint fiscus and energy crisis and corruption issues.

5.3.2 Conclusion

Chapter 4 outlined a discussion of the results and outcomes of this study. According to the results, the effects of the WGIs rule of law (RLAW), control of corruption (CCUR), asset, and age on net profit (NP) were significant as the p-values were less than 0. 05. In

terms of the outcomes of the study, there is evidence of how the levels of corruption in the country, proxied by the world governance indicators, affect the performance of State-Owned Entities in South Africa, and the overall economy. The result is statistically significant at 1% and addresses a correlation that exists between the world governance indicators scores on corruption for South Africa and the financial performance of SOEs in the country. Chapter 6 presents the conclusions and recommendations of the study.

Chapter **6: Conclusion and Recommendations**

6.1 Introduction

This study aimed to investigate the connection between world governance indicators scores on corruption and hoe they affect the performance of South African State-Owned Entities. There appears to be sufficient evidence to suggest that the issues of corruption, poor governance and bad business models have become pressing matters in South Africa as they affect the overall economy through the profitability of SOEs. This is evident in the inverse relationship between the rule of law and net profit. The rule of law, when applied by SOEs in a form of adherance to governance seems to stifle company profitability as they struggle to compete with private firms owing to laws with which they have to comply. Furthermore, when governance is implemented or adhered to, a positive effect on company revenue and net profit will be shown in SOEs, as evidenced by a positive relationship between control of corruption and net profit. Furthermore, as SOEs age, they become inefficient, less profitable, and more reliant on the state for bailouts, despite the fact that they should have been more productive.

6.2 Recommendations

Poor governance, corruption, and energy appear to aggravate the difficulties confronting SOEs. The government must weigh the necessity and urgency of adopting the recommendations of the Commission of Enquiry, assuming that corporate governance reform is a viable option if SOEs are to be profitable and efficient, or at least on pace with their private-sector peers.

Therefore, the following alternatives are recommended:

1. There should be review and redesign of policies governing SOE operations to ensure agility, as income producers for the economy, and to allow SOEs to fulfil the state's developmental while achieving bottom line.
2. There is a need to standardisation of policies of SOEs in order to eliminate apparent contradictions, gaps, and duplications. SOEs should operate in a agile environment while being sector-based and subject to clear sectoral requirements.

3. Government investment in R&D and infrastructure should boost operational efficiency and productivity.
4. The board should have the necessary operational independence to achieve the set goals without political influence from shareholders.
5. Examine the role of executive authority, boards, and the chief executive in SOE governance and operational management and be capable of devising innovative strategies to improve overall SOE performance.
6. Review, close monitoring, and benchmarking of public procurement with other developed economies, with mechanisms constantly advanced to detect any aspects of political involvement and corruption.
7. Creation of strong measures to combat corporate corruption and fraud in SOEs.

6.3 Future Studies

It is also proposed that specific remedies which might limit political meddling, such as the growth of public procurement as a gatekeeper for corruption in SOEs, should be included in future studies.

1. An investigation should be included of the efficacy of the SOEs executive authorities, boards, and the chief executive, as well as the degree of competence in South Africa
2. Operational autonomy is required to achieve the set goals without political intervention from the shareholders
3. Examine the efficacy of the legislative frameworks, policies, and strategies for SOE operations to guarantee agility
4. Examine the energy options to reduce total costs of doing business in South Africa.
5. Advance options for corruption mitigation measures in SOEs

The results of the study might help the government to uncover the underlying reasons for the poor financial performance of SOEs and to devise measures to solve them. They also highlight the key performance metrics that determine South African SOE performance. This data might assist significant stakeholders in improving the performance of SOEs. Finally, the data suggest that government aid is hampering SOE operations. As a result,

it is advised that the government evaluate its investments and support for SOEs and enforce severe regulations, with financial help withheld if performance continues to deteriorate despite financial assistance. Furthermore, rather than any financing scheme, government aid to SOEs should be dependent on crisis situations and the severity of their financial demands.

6.4 Conclusion

According to the findings of the study, it is the human aspect, not the legal instrument, that tampers with current legislation, supply chain standards, and governance procedures. On the other hand, it is clear that the issue of governance in the SOEs sector is tainted by animosity, hostility, and corruption, which then taints the whole SOE sector and so requires mature treatment. Increased government R&D and infrastructure expenditure will aid the operating efficiency and profitability of SOEs. Finally, a balancing act between the business and economic development ambitions of SOEs garnered much attention in the discussion, and it must be resolved effectively .

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Annexures-Financial Statements and World Governance Indicators Analysis



Financial Statements-3-03-202

7. Appendix-Performance Indicators Models

Net Profit Model

NP C VACC PSTAB GEFF RQUAL RLAW CCUR ASSET AGE

Dependent Variable: NP
Method: Panel Least Squares
Date: 03/02/22 Time: 10:55
Sample: 2016 2020
Periods included: 5
Cross-sections included: 17
Total panel (unbalanced) observations: 59

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.110475	2.194815	1.417192	0.1624
GEFF	-7.256373	4.994612	-1.452840	0.1523
RQUAL	-1.524856	3.539638	-0.430794	0.6684
RLAW	-3.976932	1.217608	-3.266183	0.0019
CCUR	5.670693	1.724218	3.288849	0.0018
ASSET	0.920344	0.036709	25.07136	0.0000
AGE	-1.158524	0.316597	-3.659305	0.0006

R-squared	0.936761	Mean dependent var	6.125365
Adjusted R-squared	0.929464	S.D. dependent var	2.075588
S.E. of regression	0.551248	Akaike info criterion	1.757732
Sum squared resid	15.80150	Schwarz criterion	2.004220
Log likelihood	-44.85310	Hannan-Quinn criter.	1.853951
F-statistic	128.3786	Durbin-Watson stat	0.799208
Prob(F-statistic)	0.000000		

Revenue Model

Dependent Variable: REV
Method: Panel Least Squares
Date: 03/02/22 Time: 10:59

Sample: 2016 2020
Periods included: 5
Cross-sections included: 17
Total panel (unbalanced) observations: 84

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.638596	1.695880	0.966221	0.3370
GEFF	-2.016416	3.811422	-0.529046	0.5983
RQUAL	-0.320221	2.797195	-0.114479	0.9092
RLAW	0.406922	0.932100	0.436565	0.6636
CCUR	-0.388442	1.334864	-0.290997	0.7718
ASSET	1.039185	0.030814	33.72448	0.0000
AGE	-1.212482	0.223449	-5.426217	0.0000

R-squared	0.942621	Mean dependent var	6.684477
Adjusted R-squared	0.938150	S.D. dependent var	2.079480
S.E. of regression	0.517158	Akaike info criterion	1.598719
Sum squared resid	20.59385	Schwarz criterion	1.801287
Log likelihood	-60.14621	Hannan-Quinn criter.	1.680150
F-statistic	210.8273	Durbin-Watson stat	0.428856
Prob(F-statistic)	0.000000		

Return on Asset Model

Dependent Variable: ROA
Method: Panel Least Squares
Date: 03/02/22 Time: 11:01
Sample: 2016 2020
Periods included: 5
Cross-sections included: 17
Total panel (unbalanced) observations: 84

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.638596	1.695880	2.145550	0.0351

GEFF	-2.016416	3.811422	-0.529046	0.5983
RQUAL	-0.320221	2.797195	-0.114479	0.9092
RLAW	0.406922	0.932100	0.436565	0.6636
CCUR	-0.388442	1.334864	-0.290997	0.7718
ASSET	0.039185	0.030814	1.271649	0.2073
AGE	-1.212482	0.223449	-5.426217	0.0000

R-squared	0.321035	Mean dependent var	1.362054
Adjusted R-squared	0.268129	S.D. dependent var	0.604514
S.E. of regression	0.517158	Akaike info criterion	1.598719
Sum squared resid	20.59385	Schwarz criterion	1.801287
Log likelihood	-60.14621	Hannan-Quinn criter.	1.680150
F-statistic	6.067996	Durbin-Watson stat	0.428856
Prob(F-statistic)	0.000031		

Correlation Matrix

Covariance Analysis: Ordinary
Date: 03/02/22 Time: 11:06
Sample: 2016 2020
Included observations: 59
Balanced sample (listwise missing value deletion)

Correlation Probability	NP	REV	ROA	VACC	PSTAB	GEFF	RQUAL	RLAW	CCUR	ASSET	AGE
NP	1.000000										
REV	0.941480	1.000000									
	0.0000	-----									
ROA	0.343225	0.520048	1.000000								
	0.0078	0.0000	-----								
VACC	0.033345	-0.076817	-0.024353	1.000000							
	0.8020	0.5631	0.8547	-----							
PSTAB	-0.031590	-0.009988	0.062116	0.160321	1.000000						
	0.8123	0.9402	0.6402	0.2251	-----						
GEFF	0.046439	0.009291	-0.138428	-0.266403	-0.194846	1.000000					
	0.7269	0.9443	0.2958	0.0414	0.1392	-----					
RQUAL	-0.080830	-0.053074	0.062111	0.273795	0.084532	-0.800184	1.000000				
	0.5428	0.6897	0.6403	0.0359	0.5244	0.0000	-----				
RLAW	-0.088568	-0.022565	0.049851	-0.121058	0.788831	-0.286282	0.463075	1.000000			
	0.5047	0.8653	0.7077	0.3611	0.0000	0.0279	0.0002	-----			
CCUR	-0.028153	-0.076174	-0.060470	0.499778	0.667472	0.130196	0.178133	0.616616	1.000000		
	0.8324	0.5664	0.6491	0.0001	0.0000	0.3257	0.1771	0.0000	-----		
ASSET	0.952342	0.961530	0.265408	-0.078878	-0.031252	0.055007	-0.079885	-0.041503	-0.066537	1.000000	
	0.0000	0.0000	0.0422	0.5526	0.8142	0.6790	0.5475	0.7550	0.6166	-----	
AGE	-0.397404	-0.425625	-0.559935	0.119049	0.003930	-0.002851	0.068443	0.018386	0.110136	-0.300356	1.000000
	0.0018	0.0008	0.0000	0.3691	0.9764	0.9829	0.6065	0.8901	0.4063	0.0208	-----

a. Descriptive Statistics

	NP	REV	ROA	VACC	PSTAB	GEFF	RQUAL	RLAW	CCUR	ASSET	AGE
Mean	6.125365	6.684477	1.362054	0.650770	-0.230275	0.319341	0.187078	-0.044039	0.038000	7.322423	1.508307
Median	5.702186	6.551969	1.464870	0.643622	-0.236858	0.306167	0.203909	-0.076162	0.060000	7.085287	1.431364
Maximum	9.781540	10.87544	3.492139	0.697231	-0.141504	0.367656	0.233725	0.116158	0.120000	11.56799	2.033424
Minimum	2.522444	3.087781	-0.426625	0.629004	-0.277562	0.290857	0.129722	-0.115417	-0.030000	3.930694	0.954243
Std. Dev.	2.075588	2.079480	0.604514	0.024672	0.048378	0.028071	0.038479	0.084380	0.059478	1.870363	0.257253
Skewness	0.261247	0.491578	-0.532751	1.135697	0.973176	0.752869	-0.345515	1.191786	-0.032974	0.454482	0.546812
Kurtosis	2.072664	2.676188	5.179740	2.758891	2.581849	2.086734	1.580857	2.816080	1.460606	2.938027	2.843637
Jarque-Bera	2.785174	3.750069	20.60296	18.47818	14.03610	10.98377	8.824027	20.24147	8.408209	2.905203	4.322470
Probability	0.248432	0.153350	0.000034	0.000097	0.000896	0.004120	0.012131	0.000040	0.014934	0.233961	0.115183
Sum	361.3965	561.4961	114.4125	55.31546	-19.57335	27.14398	15.90167	-3.743329	3.230000	615.0835	128.2061
Sum Sq. Dev.	249.8677	358.9117	30.33125	0.051132	0.196593	0.066191	0.124374	0.598084	0.297160	290.3553	5.559024
Observations	59	84	84	85	85	85	85	85	85	84	85