

PERFORMANCE EVALUATION OF STATE-
OWNED ENTERPRISES IN PAKISTAN



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CERTIFICATE

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Dedication

***DEDICATED TO MY
PARENTS &
SUPERVISORY TEAM***

Acknowledgment(s)

First, I owe big thanks to Allah Almighty for giving me the spirit to learn and excel in my field. Then I would like to express my sincere gratitude to my worthy supervisory committee, Dr. Saud Ahmed Khan and Dr. Hafsa Hina, for their continuous support in my thesis, for their patience, motivation, and immense knowledge. Their guidance helped me in all the time of research and writing of this thesis. I could not have imagined having better advisors and mentors for my MPhil study. Beside my supervisor, I would not have been able to succeed without the kind support and prayers of my dear friends: **Ms. Ayesha Atique, Ms. Naila Yousaf & Mr. Haseeb Hasan**. I want to say special thanks to my parents, for pouring in tireless efforts in putting everyday together and boosting my morale in the times of flickering hope.

I am using this opportunity to express gratitude to the above-mentioned wonderful people for their support, aspiring guidance, valuable and constructive criticism and friendly advices throughout my research work. I wish and hope I am able to make the best use of all that I have learned and researched in terms of conveying my knowledge to my students more effectually.

I cannot forget to thank all the well-equipped interviewees who graciously gave me their precious time and views. This study will remain a piece meal without their views and perceptions.

This dissertation cannot be completed without the significant contribution of several individuals. My master's journey could not be possible without their invaluable and substantial support, inspiration, and guidance.

ABSTRACT

State-owned enterprises (SOEs) play a significant role in offering the social amenities and services to the public and considered as a way to improve the social welfare. However, the unsatisfactory performance of SOEs has always been the trouble for the government and immense burden on economy without effectual service delivery. Therefore, this study has been conducted both qualitatively and quantitatively to find the major causes of poor performance of SOEs.

The qualitative approach provides a view of challenges facing by SOEs, on the other side, quantitative analysis identified the most deterministic factors that influence the performance of SOEs. The data for qualitative analysis was obtained through interviews while for quantitative analysis it was extracted from the annual reports on SOEs. Findings of the qualitative analysis revealed that management failure is the leading factor behind the failure of these public enterprises. Along with these factors, state involvement, myopic management, poor financial recordings, ambiguous state role, and government support are among the factors contributing to the inefficiencies and unsatisfactory performance of public enterprises. The findings of quantitative analysis revealed that employee factors have the most deterministic power for the success or failure of a public enterprise followed by the operational factors and leverage ratio.

To bring back the public enterprises on track, there is a dire need to use the employees effectively and efficiently along with control on per employee costs. In addition, qualitative analysis suggested that until the government brings the professional team on ground and without clarifying the role of state, it will remain the wish that state-owned enterprises can be on track. To sum up, it is suggested that government should act as an owner not as a manager.

Keywords: Performance Evaluation, State-Owned Enterprises, Challenges, Solutions, Pakistan.

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LIST OF ABBREVIATIONS

GCC	Gulf Cooperation Council
IMF	International Monetary Fund
LR	Leverage Ratio
NI	Net Income
NPL	Net Profit\Loss
NPM	Net Profit Margin
OECD	Organization of Economic Co-operation and Development
OLS	Outstanding Loans
OPL	Operating Profit\Loss
PEOE	Per Employee Operating Expenses
PRC	People's Republic of China
ROA	Return on Assets
ROE	Return on Equity
SOE	State-Owned Enterprise
SOMNE	State-owned Multinational Enterprises

CHAPTER 1

INTRODUCTION

State-owned enterprises (SOEs) are responsible for the provision of basic goods and services: transportation, energy, financial services (loans to people and firms) and water, around the globe. Therefore, the common justifications behind establishment of SOEs are commercial focus, to correct market failure, public interest, objectives of the state or strategic targets as well as certain natural monopolies (Khan 2018). However, SOEs are different in their nature of operations, intricacy, elegance, size, extent of control and ownership. Some of the SOEs are completely under the possession and control of government whereas some are the mixture of PPP (public private partnership) with more focus on commercial activities. A plethora of state-owned enterprises (SOEs) is in developed countries, low-income economies, and emerging markets.

At present, there are fifteen hundred State-Owned Multinational Enterprises (SOMNEs) existed in the world (UNCTAD 2019). These SOMNEs comprised of both publicly owned and privately owned in 109 countries. However, many of the SOEs are no longer under the complete possession of government and operated under mixed partnership. Among the world's largest state-owned enterprises, 60 percent are working under public private partnership (PPP). The predominance of mixed ownership is rooted in European privatization strategies that started in the 1980s. Where the government have opted to be the major shareholder and have minor ownership in some enterprises (OECD 2016a).

State-owned enterprises dominate the energy sector in Asia and Africa. On the other side, in emerging markets and low-income developing countries, bulk of the SOEs engaged in infrastructure projects in 2017. In addition, SOEs in banking sector accounts for 40 percent in low-income developing countries and BRIC (Brazil, Russia, India, and China) states, and one-third in Germany and Portugal and among advanced countries (IMF 2021). Moreover, 50 percent of the top 10 non-financial enterprises in the world were SOMNEs. These SOMNEs includes the oil and gas companies around the world.

In this regard, Pakistan is not behind other countries; total 212 SOEs are working in diverse sectors of the economy with the breakdown of 85 commercial SOEs, 44 non-commercial SOEs and 83 subsidiaries of commercial SOEs. Given in Pakistan state-owned enterprises can be classified into three broad categories such as public sector companies (PSCs), development finance institutes (DFIs) and federal authorities (FAs). In Pakistan,

large share of SOEs are engaged in energy, infrastructure, transportation & communications, finance, emerging, service, etc. However, unfortunately, most of the SOEs are in series of losses although they are contributing in country's gross domestic product and in reducing unemployment. Several factors are contributing in deterioration of SOEs in Pakistan such as mal-adjustments, inefficiencies in operations, corruption & personal interests, inferior quality of infrastructure & services and political interference (Khan 2018; Khan and Khaliq 2020).

As it is mentioned above, the SOEs are responsible for the provision of a wide variety of goods and services to people around the world. Concurrently, governments across the world are trying to manage SOEs efficiently and effectively. The reason for this is there is consensus among scholars that many state-owned enterprises are not effective & efficient, budgetary burden on the government and a duct for corruption & corrupt practices (IMF 2021; Musacchio and Pineda 2019; OECD 2018b; Wilkinson 2018).

Similarly, their performance is always the topic of debate among the stakeholders. It is true that SOEs play a significant role in offering the social amenities and services; however, economists incline to look out for inclusive economic importance of SOEs (Arocena and Oliveros 2012; Perkins 1996). It seems like there is no complete agreement on how to assess the performance and efficiency of enterprises as there are dissimilar assumptions and conclusions existed in past studies (Elliott and Zhou 2013; Huang, Li, and Lotspeich 2010). The assessment of economic outcomes of SOEs in a comprehensive way is of paramount importance as they collect direct financing from governments. If we look at it from policy makers' point, it is crucial to understand that which features of these enterprises should be considered for their improved performance. Similarly, it is useful for contributing in escalation of economic growth particularly in countries where SOEs constitutes a substantial share of the economy.

In year, 2018-19 state-owned enterprises in Pakistan generated overall revenue of PKR 4 trillion in contrast to PKR 19 trillion of book value of their total assets. SOEs contributed around 10% in nominal GDP of country in 2018-19. In addition, they employed around 0.8% of the total labor force accounted for 450000 people.

Poor performance of SOEs in Pakistan always the hotline for the state and are massive burden on the budget without effective and efficient service delivery. In addition, SOEs performance severely affected the fiscal situation of government in terms of series of losses and government subsidies. For example, in fiscal year 2018-19, commercial SOEs have a collective net loss of 143 billion PKR. Further, since 2015-16, the SOEs constantly

experienced the substantial amount of losses and adversely affecting the fiscal position of government (see Figure 1).

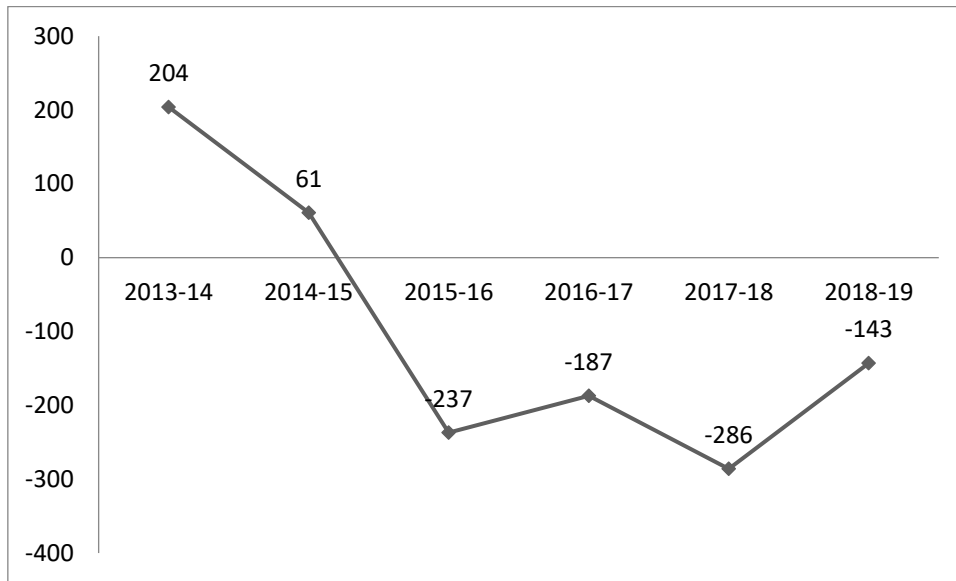


Figure 1: SOEs Net Profit/Loss 2014-2019 (In Billion PKR)

Source: Ministry of Finance, Pakistan.

Furthermore, it is revealed by assorting the performance of SOEs that one third of the commercial SOEs have faced occasional downfall over last couple of years. Moreover, top-ten loss making SOEs such as Pakistan Railways, PIA, Power Sector, NHA, and DISCOs contributed almost 90% to the total loss portfolio, collectively. (See Figure 2).

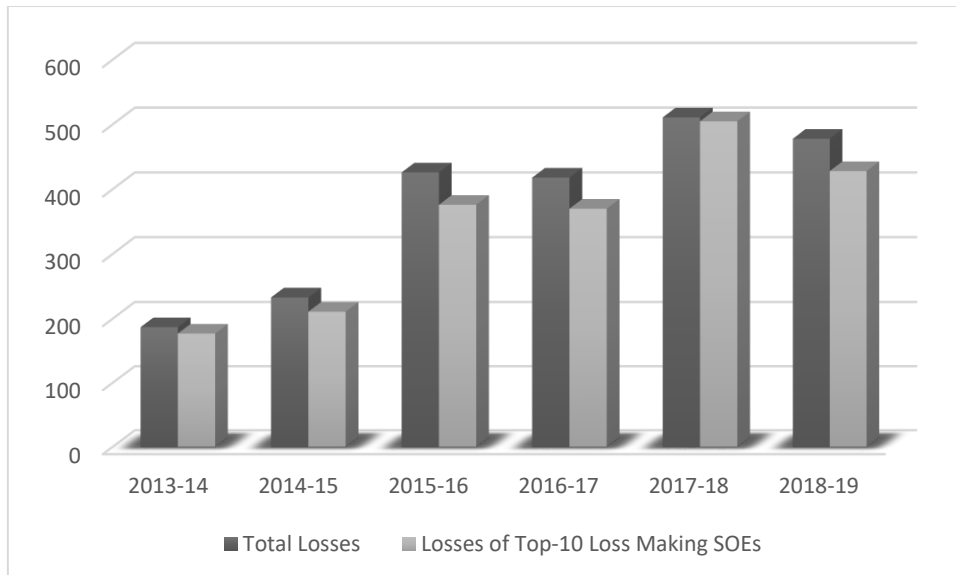


Figure 2: Contribution of Top-10 Loss Making SOEs in Total Losses (In Billion PKR)

As per the recent report on SOEs by ministry of finance Pakistan, most of the SOEs in Pakistan are not performing satisfactory in terms of profit. However, state-owned

enterprises once were the top successful stories for Pakistan. Thus, to realize economic possibility and to resolve rising concerns of government regarding the performance of SOEs, proper evaluation is needed. Consequently, assessment of why such SOEs have failed in Pakistan and what kind of reforms is required and how, is an important policy discourse that needs debate. In addition, comprehensive performance evaluation of SOEs is required with assessment by categorization of SOEs like public sector companies (PSCs), federal authorities (FAs) and development finance institutions (DFIs). However, the focus of this study is on the top loss-making state-owned enterprises in Pakistan. With this background and problem in mind, in this study, an attempt has been done to evaluate the selected state-owned enterprises in Pakistan.

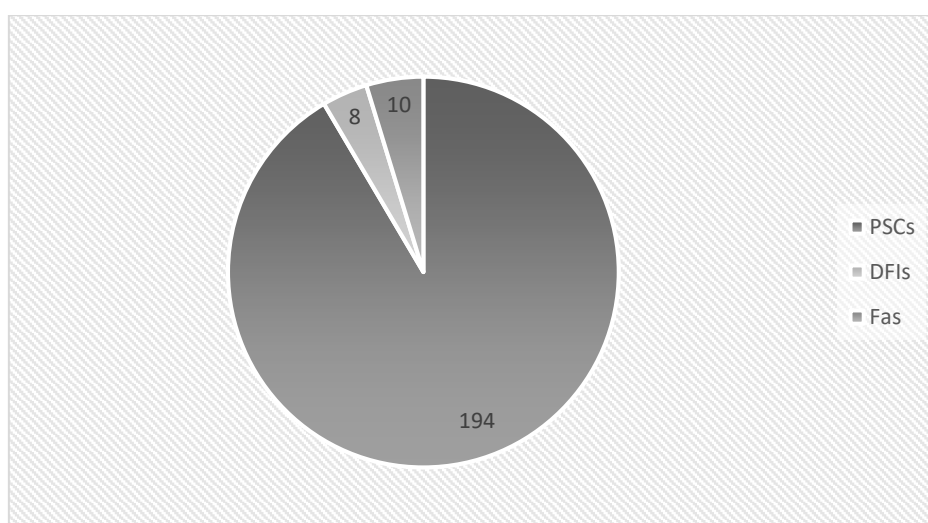


Figure 3: Number of SOEs in Each Category

Source: Ministry of Finance Pakistan.

1.1 Research Problem

For the last many years, the performance of SOEs has been the topic of debate. In literature, the studies only focused on customer satisfaction, governance, and profitability criteria or just concerted on a single entity like Pakistan Railways (Cheema 2015; Iftikhar 2015; Tahir 2013). Therefore, in this study, we tried to understand the performance of SOEs beyond the profitability and governance dimensions. To assess whether these state-owned enterprises are failing or not and what is the cause of failure. In addition, an attempt to identify the various constraints facing by the SOEs in Pakistan: managerial, regulatory, political, and financial and solutions to overcome these challenges. Moreover, we tried to recognize the policy loopholes and recommendations based on the findings of the study, which will help

to make SOEs functional, sustainable, and profitable, along with achieving social and economic objectives.

1.2 Objectives of the Study

The **key objectives** of this study are:

- 1.2.1. To identify the factors affecting the performance of the loss-making SOEs.
- 1.2.2. To identify the issues facing by these SOEs: administrative, political and economic\financial.

1.3. Significance of the Study

State-owned enterprises play a vital role in the growth and development of a country. It is also true that their mediocre performance can cause a slowdown in economic growth. It is therefore crucial that the federal government should conduct a comprehensive performance evaluation of state-owned enterprises, regularly. We believe that this study is an important contribution to literature as findings on the channel could help in devising policies for making SOEs successful and their reform. Especially, in the case of Pakistan, this research is especially meaningful for two reasons. Firstly, it will help us understand the various determinants of success or failure of these SOEs in Pakistan over time, and secondly, because no proper assessment on SOEs exists in Pakistan. Moreover, regarding policy implications of this study, we believe that not only profitability is important but also debt, per employee factors: cost, revenue & productivity, operational and structural factors are more decisive in the evaluation of their performance, unfortunately, that are among the neglected factors. Besides, by this evaluation, we able to find the main failure factors of the SOEs.

1.4 Organization of the Study

This study structured as follows: Chapter 2 covers the review of literature relevant to this study. Further, chapter 3 presents the data and methodology of the study and Chapter 4 reports the results & discussion. Finally, Chapter 5 focuses on conclusion and recommendations based on the analysis of this study and Chapter 6 covers the legal overview of public enterprises in Pakistan.

CHAPTER 2

REVIEW OF LITERATURE

2.1. Introduction

Keeping in view that prime policy discussion related to State-owned Enterprises (SOEs) in both national and international discourses mainly has been revolving around their privatization for last two to three decades; hence, the review of literature on SOEs has been divided in following four categories:

- i) State-Owned Enterprises and Their Role in the Economy
- ii) Economic Evaluation of State-owned Enterprises
- iii) Ownership Status and Enterprises Performance
- iv) Privatization Versus Nationalization of Industries

The rationale behind these four categorizations is to build an overview of those researchers that have highlighted the benefits of SOEs from economic and welfare point of view and also those that have advocated for privatization of SOEs and finally to place these two alternative viewpoints in the context of available information on economic evaluation of state-owned enterprises.

2.2. State-Owned Enterprises and Their Role in the Economy

A plethora of studies has been conducting on the role of SOEs in the economy particularly with regard to their effect on economic growth and social wellbeing. For instance, (Putterman and Dong 2000) assessed the role of SOEs in the Public Republic of China from 1950s. The finding from this research proved SOEs benefited social welfare of a country in number of ways such as increased employment and saving rates along with rational wages and promoted industrialization. Another study by (Huang et al. 2010) explored that SOEs helped increased social stability and overall wellbeing and provided an extensive amount of jobs during People's Republic of China economic transformation period. In addition, this study highlighted that during this period, a positive impact of stability prompted by SOEs could be seen on the performance of private firms.

Moreover, (Kloviene, Gimzauskiene, and Misiunas 2015) claimed that SOEs are fundamental elements in public sectors like water, energy, health, communication, public transportation, education, and other social services. They also explored that a substantial part of GDP in Baltic countries is contributed by SOEs; hence, a suitable assessment foundation for their performance is required. Similarly, while identifying the SOEs role in China, (Jones

and Zou 2017) explored that since 1970s, country's disintegration, internationalization and rationalization broaden their independence.

In addition to above, a number of scholars delve into the role of Chinese state-owned enterprises in their economic growth. As the theory of unbalanced growth by the Hirschman suggested that economies in developing world could stimulate their growth by investing in industries with high upstream and downstream linkages. In this regard, (Holz 2011) estimated that state-owned enterprises account for about 2% of growth in their local region. Furthermore, empirical estimation revealed that in the 1990s a negative impact of state-owned enterprises has found, even though this impact declined and finally ceased in 2000s. By the same token, (Abramov, Radygin, and Chernova 2017) exposed that in recent years the impact of state-owned enterprises on economy and GDP have had declined and only 26 enterprises accounted for about 28 percent of GDP. Surprisingly, the impact of energy sector enterprises increased on the economic growth. However, since 2008 the increasing trend of SOEs stopped in capitalization.

2.3. Economic Evaluation of State-owned Enterprises

Even though a plethora of studies conducted to evaluate the economic performance of SOEs around the globe. However, some studies examined the performance by utilizing financial and profitability factors, in contrast other used efficiency and productivity indicators among SOEs and private owned firms to assess the economic performance. While, methodology of assessment differs across studies depending on the nature of analysis.

Generally, scholars consented that privately owned enterprises have higher efficiency than state-owned enterprises. In this regard, (Perkins 1996) revealed that in China privately owned firms outstripped the state-owned enterprises in terms of TFP (total factor productivity). In addition, he argued that firms who are located in Shenzhen and Guangzhou have higher total factor productivity as compared to those who situated in Shanghai. In retrospection, his findings confirmed that total factor productivity (TFP) is higher in export-driven state-owned enterprises.

Similarly, (Arocena and Oliveros 2012) conducted a study in Spain to assess the efficiency of state-owned enterprises in post and pre-privatization time by employing double bootstrap data envelopment analysis method in Spain. Their findings exposed that in pre-privatization era both the private firms and state-owned enterprises not have any significant difference in efficiency. However, they argued that the efficiency is higher in recently privatized enterprises as compared to their private opponents. Besides, (Elliott and Zhou 2013) contended that productivity is lower in non-exporting SOEs in China, less than

privately owned irrespective of local and foreign status. Conversely, based on export status, state-owned enterprises become more productive, even they outstripped the foreign exporters. This flies in the face of the widespread belief that state-owned enterprises are less productive.

In addition to above, some studies conclude that reforms have the potential to improve efficiency of state-owned enterprises. For instance, the reforms that made in 1998 in China had positive and significant impact on the performance of state-owned enterprises in terms of efficiency and productivity (Fu, Vijverberg, and Chen 2008). Correspondingly, (Yao 1997) found that reforms related to incentives and profit and sharing has boosted the productivity of Chinese state-owned enterprises by providing incentives in return of better performance and fostering a competitive ecosystem for markets. Similarly, (Ngu 2003) conducted a study in Viet Nam and noted that after the Doi Moi economic reforms the performance of state-owned enterprises heightened in terms of total factor productivity (TFP) at 3% rate of growth and contributed 40 percent in total output of entities. Likewise, (Nguyen 2015) offered a theoretical framework by contrasting the performance of public and private companies based on Bertrand competition system in which companies fight on prices rather than quantities and explained that why the profitability of state-owned enterprises fell due to social welfare aspect rather than focusing on profits. In addition, concluded that profits of SOEs are relatively low as compared to privately owned enterprises.

We can also use other economic indicators to examine the performance of state-owned enterprises that includes profitability and financial aspects of an entity. In this respect, (Aivazian, Ge, and Qiu 2005) utilized the profitability indicators to assess the performance of SOEs in China, which includes ROS (return on sales), efficiency related factors: per employee sales and productivity, and investment factors. On the other hand, (Lin and Rowe 2006) evaluated the performance exclusively on profitability by return on assets, which is further describe as net profits over assets by (Astami et al. 2010). However, other scholars like (Abramov et al. 2017) used a comprehensive framework based on financial indicators to evaluate the economic performance of state-owned enterprises: gross margin (per employee revenue), debt burden profit margin, and ROE (return on equity). Likewise, (Szarzec and Nowara 2017) used profit margin, current ratio (current assets/current liabilities), ROE (return on equity) and solvency ratio (shareholder funds/total assets).

A nonconventional framework also used for evaluation purposes. Some studies were conducted in order to assess whether the profit maximization align with the economic

behavior of state-owned enterprises, and thus work as commercial entities. In this regard, (Xu and Birch 1999) concluded that this happened in the electricity and energy sector public enterprises, while, employment generation is prevailed in service related SOEs. Similarly, (Kloviene and Gimzauskiene 2016) emphasized that to check the SOEs performance by utilizing traditional factors: financial and profitability indicators may mislead the policy maker in forming policies, as they were not suitable because of diversified features of state-owned enterprises. Rather, they recommended that regulatory bodies responsible for the evaluation of accountability and performance by employing qualitative nature of methods.

2.4. Ownership Status and Enterprises Performance

It is a general perception that SOEs are less productive as compared to privately owned enterprises (Djankov and Murrell 2002; Estrin et al. 2009; Li and Rozelle 2000, 2004; Megginson and Netter 2001). In spite of this fact, (Borisova et al. 2015) maintained that state-owned enterprises remain key actors of the global economy.

A number of studies conducted to examine the differentials in performance of SOEs and privately owned enterprises, as (Cheng, Li, and Li 2021) explored that SOEs have upper hand in terms of total factor productivity (TFP) and productivity of labor as compared to their opponents (private enterprises). This is mainly because of that; SOEs typically have more access to human-physical capital and markets. In contrary, private firms were leading in terms of financial indicators such as ROE (return on equity) and ROA (return on assets), as they have commercial objectives. Similarly, (Phi et al. 2020) exposed that are less productive in generating profits than their private counterparts.

Furthermore, numerous studies revealed that state ownership is more productive than private ownership and reforms in SOEs have failed to bring any significant impact on the performance of state-owned enterprises (Kole and Mulherin 1997; Omran 2004; Poczter 2016). In the same way, (Kole and Mulherin 1997) conducted a study to evaluate the performance of seventeen Japanese and German state-owned enterprises during postwar period and they confirmed that both the state-owned and private owned enterprises did not have any significant performance dissimilarity. In addition, they argued that when economies have a competitive atmosphere, although state-owned enterprises are required to work efficiently, however, other factors than ownership status could capture the true picture of performance evaluation. Likewise, another study confirmed that privately owned firms do not have showed a significant improvement in performance as compared to state-owned enterprises. In spite of this, the author went on to say that, the process of privatization could have a significant impact on public enterprises.

On the contrary, a group of scholars argued that private owned enterprises are more productive and profitable as compared to the state-owned enterprises (Boardman and Vining 1989; DeWenter and Malatesta 2001; Megginson, Nash, and Van Randenborgh 1994). Furthermore, (Boardman and Vining 1989) cited that state-owned and even though the mixture of ownership cannot compete with privately owned enterprises in regard of efficiency and profitability. However, state ownership can take precedence in markets where externalities and barriers to entry are high.

2.5. Privatization or Nationalization

The upper mentioned controversies about the association between performance and ownership status of enterprises led the foundation of debate whether the process of privatization can enhance the performance of enterprises or not in almost all aspects: financial, profitability, structural and situational.

In this regard, (Megginson et al. 1994) claimed that privatization of state-owned enterprises can lead to better performance outcomes in terms of output up-surfing, operative efficiency, investment in capital, profitability, paying dividend and a reduction in losses. Further, they concluded that private ownership could be more advantageous for economies. Similarly, (DeWenter and Malatesta 2001) noted that a shift from state-owned to private owned enterprises could increase the firm's profit, maintaining the argument that state-owned enterprises are less efficient and profitable. On the contrary, (Ntiri 2011) evaluated the performance of SOEs before and after privatization and found that after the privatization of state-owned enterprises there was no significant improvement in performance of operating and financial aspects.

Moreover, studies claimed that societies get more benefits of privatization particularly in terms of service delivery. In addition, both economists and political scholars have consent that public sector institutes not work efficiently because of multifaceted issues of poor governance, political interference, corruption, incompetence and cost heavily to state in order to stand with those SOEs (La Porta and Lopez-de-Silanes 1999). Accordingly, they uphold that well-performed private enterprises could be source of revenues for governments in terms of tax collection, improvement in service delivery and product quality, source of employment and quick adopters of technology that ultimately lead to economic growth and development. Similarly, (Boubakri and Cosset 1998) examined the performance of state-owned enterprises in post and pre-privatized period and found that averagely enterprises performed well after privatization in terms of profitability, operational efficiency,

investments in capital, payments, employment, output and lead to a reduction in leverage and surge in dividends.

Besides, in case of Egypt, (Khattab 1998) assessed the performance of 28 SOEs after their privatization. He found that privatization led to an increment in sales of 71 percent of enterprises, 68 percent of enterprises increased earnings, more surprisingly 96 percent increased per employee remuneration and finally yet importantly, it was the source of reduction in short-term and long-term loans of 82 percent enterprises. Similarly, (Dowlah 1996) evaluated the performance of top ten underperformance-manufacturing enterprises and after privatization; they showed a significant improvement in their performance: profit, upsurge in productivity & sales, productivity of labor, capacity use and reduction in cost of unit. Moreover, study conducted by (Bennett and Johnson 1979) found that privatized firms could offer the same output level but at lower costs as compared to state-owned enterprises. In addition, (Boycko et al. 1993) maintained the argument that privatization leads to improvement in efficiencies of enterprises.

There are also arguments against privatization prevailed. As, it is believed that privatization only generate monetary gains for governments for once but state lost their assets permanently. Furthermore, performance of enterprises more linked with the competition as comparably to status of ownership. In this respect, (Atkinson and Halvorsen 1986) argued that inefficiencies occurred in SOEs due to the isolation from competition rather than state ownership and not inherently adopted. Similarly, (SHAIKH 1985) conferred that performance level on average is much better in state ownership as compared to private ownership era. Similarly, (Bishop and Kay 1989) examined the after impacts of privatization program in British and noted that before privatization state-owned enterprises performed well as compare to after privatization. Second, there is concern that privatization process could lead to unemployment and deteriorating working conditions, in the short-term in divested companies and in the long-term in the overall economy.

Some claim that even though privatization increases operational efficiency, however, the majority of the benefits accumulated by relatively few stakeholders, administrators, internal or external investors, those belonging to the political class, where the cost is incurred by so many, especially taxpayers, customers and employees, consequently reduce the welfare at great extent. Furthermore, there is widespread concern that alleged corrupt practices and lack of accountability in privatization transactions have reduced benefits and enhanced wider governance challenges. In addition, some studies show little evidence of improvement in

performance of state-owned enterprises after privatization (Boardman and Vining 1989; Caves and Christensen 1980).

In retrospect, the outcomes of studies regarding the state-owned performance varies from one another. Some studies hold out the success stories of state-owned enterprises in the GCC economies (Hertog 2010), while other found that the relationship between the financial performance and privatization of state-owned enterprises is not clear or argued that privatization of state-owned enterprises is ineffective (Dawley and Haidar 2008) or not congenial at all (Denisova et al. 2012). However, other authors proclaimed that SOEs privatization has positive impact on their performance (Boubakri et al. 2011; Rosyda and Raharja 2020; Sprenger 2011).

2.6. Public Enterprises in Pakistan: A Legal Overview

This section discusses the establishment of SOEs, their legal classification such as categorical and sectoral. In addition, it focuses on the corporate governance rules developed for public enterprises. This section is descriptive in nature and data is collected from the different sources such as companies' act 2017, companies' ordinance 1985, corporate governance rules 2013 and expert's views.

2.6.1. Categorization of State-Owned Enterprises

Given in Pakistan state-owned enterprises can be classified into three broad categories such as public sector companies (PSCs), development finance institutions (DFIs) and federal authorities (FA). SOEs are operational in various sectors of the country including 85 commercials, 44 non-commercial and 83 subsidiaries of commercial SOEs.

Many SOEs are formed during the last decade, comprising autonomous bodies, companies, authorities, corporations, funds and trusts to carry out tasks which were not considered by Federal Government to be performed by its ministries and related departments. These bodies are of various kinds regarding their incorporation structure such as: they are registered as companies with Securities and Exchange Commission of Pakistan, formed by special enactments, and registered as funds, trusts, and foundations. Furthermore, the size of SOEs portfolio is increased by the amalgamation of various companies due to the passage of time and intricacy of operations of these bodies. At present, 212 SOEs are assimilated by the Federal Government consisting of funds, trusts, and subsidiaries.

2.6.2. Legal Classification

State-owned enterprises in Pakistan are classified as commercial enterprises and non-commercial enterprises. The portfolio of commercial public enterprises contains 87,

whereas, there are 49 non-commercial enterprises in Pakistan. Moreover, these enterprises were established under different legal instruments such as companies act 2017, under special enactment. As per the statistics of 2019 Federal footprint on state-owned enterprises, 71 commercial state-owned enterprises were established under the company’s act 2017, similarly, 16 commercial enterprises were established under the special enactment. By the same token, total 49 non-commercial state-owned enterprises were established under special enactment. Table 1 provides the summary of public enterprises established under different legal instruments.

Table 1: Establishment of Public Enterprises under Different Legal Instruments

Legal Instrument	Number of Public Enterprises
Established through Enactment	65
Under the Companies Act 2017	71

2.6.3. Corporate Governance

The corporate governance mechanism of public enterprises analyzed by collecting data from the official documents published by the *Stock Exchange Commission of Pakistan* (SECP) and available on its website. Various factors were chosen to examine the mechanism of governance such as *minimum number of directors, appointing authority(s), appointment of auditor(s), board of directors, and separation of chairman office and managing director positions*. Table 2 review the sections and clauses relating to governance system under numerous legal instruments.

2.6.3.1. Directorate

The directorate or board of directors of a company has a paramount importance in today’s corporate governance. The board is responsible to strategize or\and plan the company’s both short-term and long-term objectives. In addition, they are responsible to evaluate the progress against the set objectives of the entity. To achieve the set objectives of the company, the directorate must be independent in decision making. In case of public enterprises in Pakistan, we have a well-defined framework but lacking in implementation. One of the interviewees was also confirmed this fact that companies have clear and well-defined legal framework but the implementation of the framework following meritocracy put questions always. Resultantly, our governance declines which leads to poor performance by the public enterprises. Different indicators are included in this part to examine the directorate mechanism in different legal instruments. The Table 2 evident that all the legal instrument

provides a separate board. As per the section 154 (c) of the companies act 2017, it is mandatory for every single enterprise to have at least three directors and this condition relaxed up to 7 members. Similarly, corporate governance rules made mandatory for every enterprise to have at least 1/3 of its total members as number of directors and appointing authority is comprised of government and shareholders under the section 3(6).

Further, all the legal instruments have separated the chairperson office and chief executive's roles and responsibilities to smoothen the day to day operations of public enterprises. Additionally, all the three legal frameworks have provided the authority to the board of directors to elect a chairman for the company.

Under the companies act 2017, first auditor of the company will be appointed by the board and subsequent auditors will be appointed by the company under the section of 246 (1) and 192 (1), respectively. By the same token, section 252 of the company's ordinance of 1984 made it mandatory to appoint the auditors in annual general meetings, similarly, under the section 21 (1) of the corporate governance rules 2013 audit committee will be appointed by the board of directors.

Table 2: Corporate Governance Under Various Legal Instruments

	Companies Act 2017	Companies Ordinance 1984	Corporate Governance Rules 2013
No. of Directors	7* (max), sec. 154(d) 3**(min), sec. 154(c)	7 (minimum), sec.174	1/3 of total members, sec. 3(2)
Appointment of Directors	Elected in AGM***, sec. 134(2c)	Elected by shareholders in AGM, sec. 178	Government and other shareholders, sec. 3(6)
Appointment of the Chairman of the Board	Elected by the directors, sec. 35	Elected by the directors, sec. 27	Elected by the board of directors, sec. 4(4)
Appointment of CEO\MD	By the board, sec. 187(1)	Appointed by directors, sec. 198 & 199	By the board or\and government, sec. 5(2)
Separation of Chairman & CEO\MD	Yes, sec. 192(2)	Yes, sec. 187 & 201	Yes, sec. 4
Appointing Authority for Auditors	1 st Auditor(s) by the board, sec. 246(1) Subsequent auditor(s) by the company, sec. 192(2)	AGM, sec 252	Audit committee by the board, sec. 21(1)

*: Listed Companies; **: Other than listed companies; ***: Annual General Meeting

Source(s) of Information: Companies Act 2017, Companies Ordinance 1985 & Corporate Governance Rules 2013

2.7. Contribution to Literature

If we look at the evaluation on performance indicators done in literature so far, we come to know they only focused on profitability and/or productivity characteristics. This study differs from previous literature on SOEs in the sense that it will not only involve the assessment of profitability or productivity dimension but will also capture the dynamics related to their operational, structural, and employee characteristics. Hence, through these additional channels of evaluation, this study will attempt an evaluation of Pakistan's SOEs not just in the context of capturing their failures or successes but rather will also go into the depth of the problem by establishing the underlying governance and management aspects of such institutions. This in itself will be an important value addition to the existing international literature on SOEs in general. More specifically, in the case of Pakistan, there is very limited research on SOEs despite having them in huge numbers and with varying degrees of performances.

CHAPTER 3

DATA AND METHODOLOGY

This section presents the study's methodology, which involves the methods and processes used to perform the analysis. Theoretical background, empirical framework for quantitative analysis, data collection, variables construction, and qualitative analysis are among the topics covered.

3.1 Qualitative Approach

In qualitative analysis, an attempt has been done to identify the various constraints facing by these SOEs in Pakistan such as administrative, political, and economic and solutions to overcome these challenges. Moreover, this section also covers policy loopholes and recommendations are based on the findings of the study, which will help to make SOEs functional, sustainable, and profitable, along with achieving social and economic objectives. The basic purpose of this part is to provide a brief overview of the research strategy and data method(s) for this qualitative approach. This section took into consideration a more in-depth understanding of experts in this area and brought solutions to make state-owned enterprises in Pakistan functional and sustainable.

The following sections describes the research process in detail. In addition, it provides information about the methods used during this analysis as well as justification for the acceptability of this technique. Moreover, this section also depicts the various stages of the analysis, including research design and the procedure of carrying out interviews and conducting surveys.

3.1.1 Research Strategy

In identifying and trying to understand the relationship between variables, a quantitative methodology is good (Creswell and Poth 2016), however, on the flip side, when a study is intended to delve into a phenomenon based on the perception of an individual's experience and expertise in a given situation, in this case, a qualitative approach is the way to go (Stake 2010). Moreover, (Denzin and Lincoln 2005) said that the topic under review and type of research questions determined the research strategy or method to be used. Since the purpose of this section is to obtain the expert's opinion on the situation of public enterprises in Pakistan. Therefore, the qualitative approach is chosen.

3.1.2 Justification of Choosing Qualitative Approach

Qualitative approach is a multi-dimensional research strategy that includes an interpretive and clear methodology for the subject under study. The multiform nature of qualitative approach makes it easier for analysts to develop a holistic picture of the subject matter (Denzin and Lincoln 2005). The following considerations lie at the root of qualitative research.

- ✓ The qualitative approach examines linkages across a system.
- ✓ Qualitative research emphasizes understanding a particular social context, not necessarily predicting it.
- ✓ The qualitative approach to research integrates notified consent decisions and takes ethical concerns into account.

In addition to the above mentioned factors, the qualitative design of the research makes the researcher the instrument of research. Moreover, it also includes space for the analyst to describe his or her own prejudices as well as ideological preferences.

The objectives of qualitative study typically exploratory and descriptive in nature rather than explanatory (Ferreira et al. 1988). The descriptive style of qualitative research approach allows the researchers to present a narrative including its respondent's experiences, which could either ease or hinder the underlying thesis. It also assists readers to understand the background of the situation, the undeniable nature of the dilemma, and the impact of the situation (Meyer 2001).

3.1.3 Research Design

The research design facilitates us in achieving the study's objectives. This evaluation, which is centered on descriptive study approach as well as research design, emphasizes primarily on the concerns of what, how, why and etc. It also gives a detailed description of the researcher's experience. Since this section intended to discuss challenges and issues facing by the state-owned enterprises in Pakistan. Therefore, this study is descriptive in nature.

3.1.4 Research Instruments

To achieve the qualitative objectives of this study. Semi-structured interviews have been conducted with the experts of this line to understand the grounds in a better way and to collect the data.

3.1.4.1 Interviewing

For the qualitative research, this has been the most popular data gathering format. Interview method, as per Oakley, is a paradigm in which practices and rules are not merely

documented, and also accomplished, challenged, and concealed (Oakley 1998). Since not a single one research interview is without structure, therefore, almost all interviews in qualitative nature of research are semi-structured, in-depth or slightly structured (Mason 2002). Unstructured interviews are commonly used in abiding field research because they allow individuals to answer themselves according to their own terms and at their own rhythm, with little control over their responses (Corbin and Morse 2003).

The unstructured interviews are more like a conversation vs an interview, and it is always assumed to be a "managed discourse" oriented toward the interviewer's interests. Interviews which are non-directive in nature are the type of unstructured interviews that acquire in-depth information and do not normally include a set of questions in advance. Likewise, focused interviews are another type of unstructured interviews wherein the interviewers are well familiar with respondents. However, whenever the interviewees veer off from the main topic, then the interviewer insists the interviewee back to the subject matter. Similarly, informal interviews considered an alternative to the above discussed types of unstructured interviews, conversational interview, in which a list of unplanned queries is constructed in real time throughout the discussion (Gray 2013).

On the flip side, semi-structured interviews are also in-depth interviews in which respondents must answer pre-determined open-ended questions and are thus commonly used by various experts in their research. Moreover, semi-structured, in-depth interviews being frequently used by many researchers as an interviewing format, with a single person and as well as with a group people (Corbin and Strauss 2014). These kind of interviews are performed only once, with a person or a group of people, and last from about thirty minutes to even more than sixty minutes, sometimes (DiCicco-Bloom and Crabtree 2006). In addition, questions in semi-structured interviews are grounded on the guide that is developed for these kind of interviews. The guide is actually a schematic demonstration of subjects being investigating or questions that interviewer's required to examine (DiCicco-Bloom and Crabtree 2006).

Indeed, interview guides are useful for studying multiple responders more methodically and fully, as well as keeping the interview focused on the intended line of action, in order to make the best utilization interview time (DiCicco-Bloom and Crabtree 2006). Further, the interview guide's questions include the core questions as well as a number of related questions that improve as the interview guide is pilot tested (Creswell and Poth 2016). Recording interviews is considered an excellent alternative for capturing data more effectively, although it can be a source of contention between the researcher and the

respondent. Handwritten notes taken during the interview are untrustworthy, and the researcher may miss important details.

Similarly, in focus group discussions preset groups of people invited to be interviewed in the supervision of a session mediator, and these conversations typically run 90 minutes (Creswell and Poth 2016). Group discussions, like every other research technique, have some inherent value in terms of allowing participants to voice their viewpoints openly. On the flip side, the limited themes can be highlighted in these kinds of discussion forums, which may lead to the fewer initiatives as well as recommendations about the subject under investigation.

To recapitulate, interviews make convenient for the researchers to pay head on the content of interview and verbal prompts through the recording of the interview; also, it allows transcriptionist to produce a “precise transcript”, of the interview.

3.1.5 Data Transcription

Transcription is the cycle wherein researchers converts the communicated and non-verbal language of participants into text based structure. Transcription is a cycle or technique which assists with changing over oral meetings into literary structure. The analyst took the meeting and record the outcome yet with the assistance of transcription, researchers can put down the recording in text structure. This strategy is applied uniquely in the qualitative examination approach. Thus, after the effective assortment of data fact verification and transformation, was finished. Information was transformed from interviews into a transcript form with the end goal of qualitative analysis of the state-owned enterprises in Pakistan.

3.1.6 Familiarization

After the transcription of data, data goes through the subsequent stage known as familiarization. At the point when qualitative information is changed over from recording into a written structure, the analysts notices and focuses on that text based information and picks all comparable answers from the content information of a similar exploration question.

As such, familiarization assists the researchers with retaining the information by tuning in or perusing information from records, and afterward the analyst will mindful of the core concepts of data and key terms and after that intermittent subjects and make another note of its if needed.

Table 3: List of Interviewees

Sr. No	Name	Designation	Organization
1	Ms. Afia Malik	Senior Research Economist	Pakistan Institute of Development Economics Islamabad
2	Ms. Saba Anwar	Research Economist	Pakistan Institute of Development Economics Islamabad
3	Raja Rafiullah	Research Fellow	Pakistan Institute of Development Economics Islamabad
4	Dr. Uzma Zia	Senior Research Economist	Pakistan Institute of Development Economics Islamabad
5	Ms. Nadia Hussain	Assistant Chief	Planning Commission of Pakistan

3.2 Quantitative Approach

3.2.1 Theoretical Framework

Both the privately owned and publically owned enterprises play a climatic role in growth and development of economies. However, they might be differing in their objectives: private firms purely profit oriented, on the other hand, state-owned enterprises focused on different dimensions of the economy including profit, welfare and least employees cost (Taghizadeh-Hesary et al. 2019). Moreover, the theoretical model for this study is opted from the study of (Taghizadeh-Hesary et al. 2019). Theoretical framework is briefly explained below.

3.2.1.1 The Case of Privately Owned Enterprises

In monopolistic competition, profit function of private owned firms is equal to total revenue (TR) minus total cost (TC) subject to production function, which depend on capital and labor owned by the enterprise, in equation (3.2) Q, K and L represents total output of the firm, capital and labor, respectively. Further, ϑ in equation (3.1) represent profit of the firm.

$$\text{Maximize } \vartheta = P(Q).Q - CQ \quad (3.1)$$

subject to

$$Q = f(K, L) \quad (3.2)$$

Moreover, to obtain the per employee profit function. We need to divide the profit function given in equation (3.2) by total labor (L) and this will yield:

$$\frac{\vartheta}{L} = P\left(\frac{Q}{L}\right) \cdot \left(\frac{Q}{L}\right) - C\left(\frac{Q}{L}\right) \quad (3.3)$$

To transform the function given in equation (3.3) into the form of Cobb-Douglas production, the following assumptions to be follow:

- There is CRS (constant return to scales);
- β denotes the elasticity of production of capital;
- $1 - \beta$ represents the elasticity of production of labor.

After dividing, the Cobb-Douglas production function by labor (L) provides us $\frac{Q}{L} = \left(\frac{K}{L}\right)^\beta$ and by putting this into equation (3.3), resultantly, per employee profit equation generated:

$$\frac{\vartheta}{L} = P\left(\frac{Q}{L}\right) \cdot \left(\frac{K}{L}\right)^\beta - C\left(\frac{K}{L}\right)^\beta \quad (3.4)$$

Subject to

$$Q = f(K, L) = K^\beta L^{1-\beta} \quad (3.5)$$

To simplify the equation (3.4), we assumed the followings:

1. $\tilde{\vartheta} = \frac{\vartheta}{L}$
2. $q = \frac{Q}{L}$
3. $k = \frac{K}{L}$

Hence, above conditions yield the following:

$$\tilde{\vartheta} = P(q) \cdot k^\beta - Ck^\beta \quad (3.6)$$

Moreover, we take into consideration privately owned firms under a monopolistic competitive market structure where the equilibrium is obtained when the marginal cost is equivalent to the marginal revenue. Thus, to acquire the equilibrium, we explain the profit function by employing first order condition with reference to K, which provide us:

$$\frac{\partial \tilde{\vartheta}}{\partial k} = \left(\frac{\partial P}{\partial q} \cdot \frac{\partial q}{\partial k}\right) k^\beta + P(q) \cdot \beta \cdot \frac{q}{k} - \frac{\partial C}{\partial q} \cdot \frac{\partial q}{\partial k} \quad (3.7)$$

$$\frac{\partial \tilde{\vartheta}}{\partial k} = \left(\frac{\partial P}{\partial q} \beta \cdot \frac{q}{k}\right) q + P \cdot \beta \cdot \frac{q}{k} - \frac{\partial C}{\partial q} \cdot \beta \cdot \frac{q}{k} \quad (3.8)$$

We can rewrite the last above equation as:

$$\frac{\partial \tilde{\vartheta}}{\partial k} = \beta \cdot \frac{q}{k} \left(\frac{\partial P}{\partial q} + P\right) - \frac{\partial C}{\partial q} \cdot \beta \cdot \frac{q}{k} \quad (3.9)$$

Along with the point of equilibrium for the privately owned firms where Marginal Revenue (MR) = $\frac{\partial P}{\partial q} q + P$ and Marginal Cost (MC) = $\frac{\partial C}{\partial q}$:

$$= \beta \frac{q}{k} \left\{ \frac{\partial P}{\partial q} + P - \frac{\partial C}{\partial q} \right\} \quad (3.10)$$

3.2.1.2 The Case of State Owned Enterprises

Profit maximization is not only the prime goal of SOEs; in fact, there is another crucial objective, which is cost minimization with little inclusion of liquidity. In slightly different words, there are two modules of capital: liquidity purposes capital (K^l), and production purposes capital (K^f):

$$K = K^f + K^l \quad (3.11)$$

Now, by dividing equation (3.11) by L will give us:

$$K/L = K^f/L + K^l/L \quad (3.12)$$

The equation (3.11) presents the *Cobb-Douglas* type of the objective function of a state-owned enterprise (G) that is shown in equation (3.13), where per employee profit is denoted by $\tilde{\pi}$, per employee total cost is shown with $C(y)$, and per employee total liquidity is expressed as K^l/L :

$$G = g \left(\tilde{\pi}, C(y), \frac{K^l}{L} \right) = (\tilde{\pi})^\gamma \left(\frac{1}{C(y)} \right)^\delta (K^l)^\varphi \quad (3.13)$$

A state-owned enterprise maximize its G , subject to the per employee profit equation:

$$s. t. \tilde{\pi} = P(y) \cdot y - w - r (K^f + K^l) \quad (3.14)$$

Where, $\tilde{\pi} = \frac{\pi}{L}$, $K^f = \frac{K^f}{L}$, $K^l = \frac{K^l}{L}$, per hour wage rate is denoted by w , rate of interest is expressed with r , per employee elasticity of profit symbolized by γ . Similarly, elasticity of total cost of per employee indicated by δ , whereas, liquidity of per employee shown with φ .

The first order condition is applied on the equation (3.12) subject to 3.13 equation in order to get the optimal level of K^f which maximize G . Resultantly, this produces:

$$\frac{\partial G}{\partial K^f} = \gamma \cdot \frac{G}{\tilde{\pi}} \cdot \frac{\partial \tilde{\pi}}{\partial K^f} - \delta \frac{G}{\left(\frac{1}{C(y)} \right)} \cdot \frac{1}{\{C(y)\}^2} \frac{\partial C(y)}{\partial K^f} \quad (3.15)$$

It can be observed clearly in equation (3.14) that there are two unknown components: $\frac{\partial \tilde{\pi}}{\partial K^f}$ and $\frac{\partial C(y)}{\partial K^f}$. Therefore, we must first solve them by establishing a SOE's production function.

We evaluate the Cobb–Douglas production function for SOEs in the same way as we do for the private owned enterprises:

$$Y = F(K^f, L) = (K^f)^\beta (L)^{1-\beta} \quad (3.16)$$

Where, production function is represented with Y as a function of L (Labor) and K (Capital). In addition, parameters β and $1 - \beta$ are the elasticity parameters of capital and labor production, respectively. Further, it is also assumed that this function exhibits the constant returns to scale (CSR).

Now, to obtain the output of per employee, we divided equation (3.15) or production function in case of state-owned enterprises with L (Labor), which yields:

$$\frac{Y}{L} = \frac{(K^f)^\beta}{L^\beta} = (K^f)^\beta \rightarrow y = (K^f)^\beta \quad (3.17)$$

Where $y = \frac{Y}{L}$.

In order to find out the optimal level of capital that maximize the state-owned enterprise's profit, the first order condition of the $\tilde{\pi}$ with respect to K^f can be expressed as:

$$\frac{\partial \tilde{\pi}}{\partial k^f} = \left\{ \frac{\partial p}{\partial y} \cdot \frac{\partial y}{\partial k^f} \right\} y + p(y) \frac{\partial y}{\partial k^f} - r \quad (3.18)$$

$$\left\{ \frac{\partial p}{\partial y} \cdot y + p(y) \right\} \frac{\partial y}{\partial k^f} = r \text{ where } \frac{\partial y}{\partial k^f} = \beta \cdot \frac{y}{k^f} \quad (13.18.1)$$

$$\left\{ \frac{\partial p}{\partial y} \cdot y + p(y) \right\} \beta \cdot \frac{y}{k^f} = r \quad (13.18.2)$$

As it is already known that cost of per employee is the second component of the objective function that the state-owned enterprise minimizes:

$$\frac{\partial C(y)}{\partial k^f} = \frac{\partial C(y)}{\partial y} \cdot \frac{\partial y}{\partial k^f} = C'(y) \cdot \beta \cdot \frac{y}{k^f} \quad (3.19)$$

Next, by putting the equation (3.17) and equation (3.18) into the equation (3.14), we obtain the optimal value of k^f that maximize the G.

$$k^f = \frac{\left[\frac{\gamma}{\tilde{\pi}} \cdot \frac{\partial P}{\partial y} \cdot y + \frac{\gamma \cdot P(y)}{\tilde{\pi}} \right]}{\left[\frac{\delta G \cdot C'(y)}{C(y)} - \frac{r \cdot \gamma}{\tilde{\pi}} \right]} \quad (3.20)$$

From the equation (3.20) it is evident that the optimal value of capital that maximizes the level of G that is function of several factors like elasticity of capital production, per employee output, prices to real output elasticity, level of price of a SOE, per employee profit & cost elasticity, marginal cost of per employee, rate of interest and per employee profit.

The theoretical framework demonstrates that, in order to avoid due debt, the state-owned enterprise's best goal should be to maximize profit of per employee, minimize the cost of

per employee and maximize the liquidity required such as flow of cash or power of paying debt (solvency).

3.2.2 Analytical Framework

As we have already discussed that this study is an attempt to measure the performance of Pakistani state-owned enterprises and this is the first study of this type that evaluates the performance of SOEs comprehensively. In literature, diverse factors were utilized to evaluate the performance of SOEs not limited to profitability, operational efficiency, productivity, and governance. Therefore, factors to evaluate the performance of SOEs in Pakistan were selected fully aligned with the existing literature on the performance of SOEs globally and domestically. These factors briefly explained in Table 3.1.

The first group of variables includes total assets, total liabilities, return on equity, return on assets, profit margin, and cash flow\operating revenues. Assets are both tangible and intangible economic resources including short-term and long-term. Assets are used by enterprises to create profit. However, total liabilities include current & non-current, and long-term debt on enterprises. Return on Assets (ROA) is used to measure the financial position of an enterprise in terms of profitability ratio. In simple words, it shows that how much an enterprise generates profit by using its assets. It can be calculated by dividing net income by total assets. On the other hand, return on equity (ROE) is also one of the proxies or tools to measure the enterprise's performance. It shows the enterprise's ability to create maximum profit by using the investment of all shareholders. Return on Equity can be drive by diving net income over shareholder's equity. ROE can be utilized to measure the efficiency of an enterprise. A rising return on equity (ROE) means that an enterprise can produce more profit despite needing a lot of capital. Profit margin is one of the key indicators used to measure the profitability of enterprises and it determines how profitable an enterprise or business operation is. It can be calculated by dividing net income by revenues. Net margin, net profit ratio, or net profit margin are some of the other proxies to measure the profitability of enterprises.

The second group of variables to measure the performance of SOEs in this study consists of the debt and operating revenues of enterprises. It is the most common argument used in literature that debt is one of the leading factors behind the success or failure of an enterprise. If an enterprise failed to pay the debt on time can be bankrupt. Therefore, this factor is one of the main variables of this study to check that whether the success or failure of SOEs depends on enterprise's ability to pay its debt or not and how it impacts the

performance of enterprises. Similarly, operating revenues used as a proxy measure of the operational efficiency of enterprises.

The structural variables are the third type of variables used in this analysis to measure the performance of enterprises. This category includes solvency ratios both assets-based and liability based along with the liquidity ratio of enterprises. The solvency ratio is widely used to evaluate an enterprise's capability to meet the debt obligations of an enterprise. Therefore, it is crucial to evaluate the performance of enterprises beyond the profitability or productivity criteria. If the solvency ratio of an enterprise is lower then there is a high probability of bankruptcy. The solvency ratio plays a crucial role in determining the success or failure of an enterprise, but it has been ignored in previous studies, presumably because state-owned enterprises have "soft budget constraints" that are not subject to market liquidation.

The second last category of variables is per employee factors that are considered the most influential variables for any enterprise's performance irrespective of the ownership status. Therefore, this category incorporates all possible per employee factors in Pakistan case to check their impact on SOEs performance. These key group of variables consists of per employee profit, per employee operating revenues, cost of per employee, working capital per employee, and total assets per employee. One of the reasons behind this category is that per employee factors are used to demonstrate how effectively and efficiently an enterprise utilizes its workforce.

Finally, and most importantly, in this study, the last measure of an enterprise's performance is government support in terms of loans, guarantees, subsidies, and grants. As there is an argument that government support is a blessing and as well as a curse for enterprises to perform well. Whenever, an enterprise unable to meet its debt and other obligations government rescue them and save enterprises from being bankrupt --- a round of applause for government support. Therefore, in this study, we incorporate the role of government in determining the success or failure of state-owned enterprises.

This study will evaluate the performance of SOEs in both ways: qualitative in terms of trend & descriptive analysis and through interviews.

3.2.3 Empirical Framework for Quantitative Analysis

As per the report of Ministry of Finance Pakistan, only 10 SOEs contributes 90 % of the total losses. Hence, these top loss-making SOEs deteriorating the overall portfolio of all SOEs. Therefore, in this study we will evaluate the performance of top ten failing SOEs. Based on the above discussion the following model will be estimated empirically to evaluate the performance of selected state-owned enterprises.

$$DDD_{it} = \beta + \beta_0 X_{1it} + \beta_1 X_{2it} + \beta_3 X_{3it} + X_{4it} + \mu_{it} \quad (3.21)$$

Where,

i = Selected State – Owned Enterprises;

t = Number of Observations;

DDD (Debt Due Days) = Number of Days in Delay of Loan;

X_1 = Profitability Factors;

X_2 = Operational Factors;

X_3 = Structural Factor

X_4 = Per Employee Factor;

μ_{it} = Error Term.

In terms of quantitative analysis, we will run a regression for selected SOEs after developing index of profitability factors and operational factors along with other variables.

3.2.4 Data Collection

The data for this study is collected from the annual reports on state-owned enterprises published by the Ministry of Finance Pakistan, for selected enterprises over a seven-year period from 2013 to 2019 for the quantitative analysis.

3.2.5 Construction of Variables

The key variables such as debt, profitability, structural, government support and per employee factors will be generated from various relevant attributes by using principal component analysis (PCA), detail of PCA is given in Appendix 1. Description of few possible attributes that is considered is in Table 4 below:

Table 4: Construction of Variables

Group	Construction	Unit of Measurement
Profitability Index	Return on Equity	Percentage (%)
	Return on Assets	
	Net Income	Amount in PKR (In Million)
	Net Profit\Loss	
	Net Profit Margin	Percentage (%)
Operational Index	Operating Loss	Amount in PKR (In Million)
	Outstanding Loans	
Structural Factor	Leverage Ratio	Percentage (%)
Per Employee Factor	Operating Expenses	Amount in PKR

From Table 4, it can be observed that the unit of measurement is different for every factor. This poses a problem because factors on different scales are harder to compare, leading to misinterpret variable importance. Therefore, standardization of data has been done to avoid such problems. By doing data standardization the comparisons of factors become easier and do not mislead the researchers.

3.2.6 Econometric Technique

After generating the profitability index and structural index by employing principle component analysis. Ordinary least squares (OLS) method is used for empirical estimation. For clarification, the whole analysis has been done in STATA package.

CHAPTER 4

RESULTS AND DISCUSSION

This chapter of the study majorly revolving around the finds of qualitative analysis and the methods used for quantitative analysis. In addition, last section of this chapter covers the results of the empirical model.

4.1 Qualitative Analysis

In this contemporary era where countries around the globe are eager to develop 5G and headed towards the space and considering fourth industrial revolution; Pakistan is still indecisive about loss-making enterprises that whether to keep them or not. Definitely, according to sensible and realistic opinions, Pakistan should dismiss the loss-making enterprises. From many decades, SOEs are constantly making loss of billions, which should be the other way. Ominously, everyone is conscious about their personal incentives rather than paying heed onto these losses. Each year, nearly 90pc of the total losses are made by top ten loss-making enterprises such as Pakistan Railways, PIA, National Highway Authority and Power Companies.

If we observe the history well, we get to know that the administration of Public enterprises (SOEs/ PEs) around the globe is a demanding task. In order to refine the performance of public enterprises, numerous developed and developing countries have encountered severe challenges. Moreover, there have been various attempts to bring these public enterprises at the level of their correspondent private enterprises; however, these efforts resulted in failure instead of success.

This chapter of the thesis summarize the findings of the qualitative approach which broadly covers the administrative, political and economic challenges faced by the state-owned enterprises in Pakistan. The results in this section based on the information obtained from the well-informed experts through interviews. The main objective behind these meetings was to get the direct bits of knowledge and critical information from the people who were seen as experienced and well-informed about SOEs in Pakistan. Following that, a review of their perspectives of SOE business performance in Pakistan is conducted, including the identification of important difficulties and challenges encountered by the public enterprises.

4.1.1 Performance of Public Enterprises: A Communal View

When the interviewees were asked about the performance of public enterprises. All the interviewees unanimously agreed that the public enterprises are performing poorly in terms of efficiency and profitability, especially when compared to their counterparts. Interviewees

stated that profitability is not only the indicator of performance, however, the efficiency of state-owned enterprises matters in all.

In general, absolutely these public enterprises are not efficient and profitable. People in charge of them mostly not allowed to act in a way that is expected to oversee the state-owned enterprises affairs. State-owned enterprises that are not profitable (loss making) are also the main reason for the increase in the government's financial burden and the government's obligation to subsidize them. In addition, these SOEs are facing a very critical situation in terms of continues losses from the last couple of years. As a result, they are unable to meet their financial responsibilities to the government in terms of dividend and taxes as expected. Consequently, without government support in terms of subsidies or guarantees, indebted state-owned enterprises would not be able to pursue their activities or become insolvent.

In view of the recurrence of topics referenced by the all interviewees, the following issues and difficulties were viewed as the fundamental contributing factors in the poor performance of state-owned enterprises in Pakistan.

1. Poor Governance
2. Employee Issues
3. Unclear Objectives
4. Confused State Role
5. Political Intervention
6. Poor Financial Management
7. Unreliable Accounting Records
8. Weak Micromanagement
9. Government Support

The upper mentioned issues have been categorized into three broad classifications in accordance with the second objective of this study.

4.1.2 Administrative Challenges

4.1.2.1 Poor Governance

Interviewees asserted that poor governance structure has impacted the performance of state-owned enterprises adversely. In addition, findings revealed that poor corporate governance is a major threat to public enterprises in terms of service delivery, accountability, credibility and transparency. Some of the interviewees argued that many SOEs have their own independent board but they are not independent in decision-making. For the final decision, they always wait for the approval from the concerned ministry. One of the interviewees shared her\his experience with a public enterprise as:

S\he said that, s\he visited a DISCO company for research purposes and data was required. When I requested them for the provision of data, however, instead of giving data; the officials said that until they got the permission from the ministry they could not provide the required information.

In addition to above, another interviewee said that:

Poor corporate governance has led to poor management and serious misappropriation; for instance, some enterprises engaging in non-essential commercial activities. In many instances, certain projects (investments) or commercial activities carried out by these public enterprises may not be economically realistic and sustainable.

In accordance with the above-mentioned statement, another interviewee made a statement as:

Directors and\or management members of the most of the public enterprises are rarely held responsible for the adverse impacts of their conduct and\or punished in the event of losses or in the case of poor performance. Apparently, punishment for poor performance has not always been applied. Therefore, s\he suggested that state should follow push factor along with incentive\punishment based performance system to get rid of the poor performance of public enterprises.

4.1.2.2 Human Resource

All the interviewees collectively agreed that employee issues such overstaffing; unprofessional staff and staff's inefficiency are the leading factors behind the poor performance of public enterprises. One of the interviewees observed this dilemma as:

A plethora of state-owned enterprises has a surplus workforce and known to be inefficient. As a result, these public enterprises are unable to generate sufficient revenues to meet their total costs, partly added by soaring employee-related costs.

Besides the overstaffing issue, unskilled and incompetent staff, according to interviewees, caused further challenges for state-owned enterprises. They believed that a plethora of individuals who are in charge of public enterprises, for instance, directors and managers lacked the necessary skills, competence, and knowledge to run a business or execute suitable management activities. Directors and managers in numerous cases lacked firsthand knowledge of or competence in the firms they are overseeing. Interviewee 2 stated that:

In number of public enterprises, the government personnel in high positions are unskilled and/or lack direct skills and knowledge related to the business they are

about to manage. In simple words, they are generalists not professionals who are in charging of public enterprises. In addition, s\he argued that these enterprises can be made financially feasible if right management can be brought in. Rather than focusing on regulation what is needed to bring back those teams that run them successfully in past and in light if their experiences as well by investing in technological up gradation these public enterprises can be revived.

Further, interviewees believed that the low level of commitment to work among many employees is a critical factor that caused the public enterprise to perform poorly. Moreover, management and staff in these public enterprises may have had little incentive to engage in assigned duties and tasks. A number of interviewees explained that, regardless of the enterprise's achievements, employee benefits have not changed. For instance, interviewee 4 viewed:

There is a lack of ambition, engagement and incentives from managers and employees in many public enterprises as they believe that their salaries and\or other incentives are unchanged as per their performance. Therefore, there is no reason for them to try to get their best from themselves.

Another interviewee backed up above stated claim by saying:

Compared to those employed by private businesses, public enterprise's employees have comparatively lesser work incentives, such as wages and other economic or\and financial benefits. I believe that bad performance and inefficiencies cannot be prevented when they are not sufficiently awarded according to their work performance. On numerous occasions, misappropriation and misuse of company resources appear likely to occur.

4.1.2.3 Unclear Objectives

According to the interviewees, a plethora of public enterprises operate their business activities with the goals that are combination of commercial and social orientations. In simple words, at the same time they work for profit oriented purposes and social welfare (public policy aims) such as employment generation and\or provision of goods & services at low cost. These unclear objectives are identified as the primary contributing reason related with poor performance of public enterprises and unprofessional conducts among those who are overseeing the public enterprises management. As a result, the public enterprise sector faces a major impediment and challenge in the form of imprecise corporate objectives. Thus, interviewees thought that without explicit pre-determined organizational objectives it is hard to assess the public enterprises performance.

One of the interviewees said that:

The public enterprises, particularly so-called strategic firms, are crucial in meeting the state's long standing development goals. Many businesses, in general, serve for both commercial and social goals at the same time. This may lead to some lack of openness and misconduct in their operations. I believe that we should not permit those public enterprises to carry on their operations in this manner.

Interviewees asserted that the state should clearly distinguish and pinpoint which public enterprise should work as profit generating entities and which should operate as social welfare oriented enterprise to address such a big challenge. By doing this, public enterprises will not only work efficiently but also will grow in more productive manners in the long run.

4.1.2.4 Myopic Management

Despite all of the privatization, the public enterprise sector remains a significant part of the economy. Political involvement, incompetence, media sensationalism, and the absence of meritocracy, however, have tarnished the management. The lack of proactive management team has aggravated the situation. Moreover, in order to administer these public enterprises, there is also a lack of coordination between departments and/or ministries. Unfortunately, under the guise of public interest, all are striving to sharpen their swords. Professionals have no room in the world of public enterprises. The entire country has been taken over by the elites and others who are master of all professions and effect is obvious.

4.1.3 Political Challenges

4.1.3.1 Political Intervention

According to all the interviewees, state involvement in SOEs was not an unusual enactment as they were entirely state-owned. Although the SOEs were officially accepted as wholly independent bodies, they faced state influence which is also second primary reason behind their unsatisfactory performance. This involvement of government is ostensible in bureaucratic approaches, decision-making strategies and/or membership of a SOEs' board of directors or administrative teams. Practically, daily operational tasks and decisions should be tackled by an enterprise's corporate governance system like board of directors. More precisely, a public enterprise is needed to consult to their related line ministry for analysis and endorsement before taking a solid decision. Unfortunately, due to these bureaucratic approaches several important decisions could be impeded or changed into unrelated to real situations. Additionally, in various cases, SOEs' management teams are not accountable for

adverse consequences rather the state has to accept some of the responsibility. Interviewee contemplates that:

In several cases, state-owned enterprises are needed to commence investment projects as per the national socio-economic development goals; however, certain projects are not capital investment worthy. Thus, inadequate business performance and government grants to these SOEs cannot be evaded.

By considering these aspects, it can be asserted that government involvement is likely to do more harm than good to SOEs. Now, it is inevitable to reestablish the SOEs and improve their business efficacy by suitable decision standards and procedures through policy makers and/or related authorities accountable for regulating, administering and handling the SOEs.

4.1.3.2 Confused State Role

In the management of SOEs, the role of government is pivotal. In Pakistan, it is a common perception that unsatisfactory performance of SOEs is due to excessive interference of government in business activities of SOEs. Hence, the interviewees advocated that government as an owner ought to act like it instead of a manager. In the same context, one of the interviewees criticized that government of other countries supports the businesses contrary to our government which is controlling the businesses. Thus, government must follow the other countries in this regard and should encourage the businesses instead of excessive intervening. In addition, other interviewees had the similar point of views that government should restrain itself to intercept in business activities of SOEs and let the experts run the business. Besides, if and only if the government do its job as an owner then it will be possible to attain economic and social goals of country.

4.1.3.3 Government Support

It is not unusual to observe state subsidies in several SOEs due to the government involvement in regular operations and decision making strategies. One hundred percent interviewees claimed that various SOEs preserved access to government subsidies; although without the written permission of Ministry of Finance, SOEs are not entitled to apply for loans. However, various SOEs are obtaining public subsidies through national budget and/or policy loans which have put financial distress on government. One of the interviewees commented:

Mainly, with the help of policy measures, SOEs are under adequate concentration and supervision of government; for instance, government provides subsidies and grants to SOEs when they make losses, offers them policy lending, or give them

access to bank loans collateralized by state. Still the performance of these SOEs is not up to the mark. Interviewee further suggested and said I think state must permit the current SOEs to completely function under market oriented setup and avert them from obtaining any kind of government subsidies in case of excessive and irrational losses. If government will decide rationally regarding the subsidies to SOEs, they would work more efficiently and will make profit instead of lose.

To validate this statement, another interviewee stated that:

These sorts of government subsidies to SOEs can be resultant in unsupervised and obscure governance and administration in these SOEs. Besides, it might be possible that a handful of SOEs continue their business activities by following market oriented strategies. Noticeably, many in charge personnel who are responsible for administering the SOEs have a perception that their SOEs are going to be remained subsidized by government in case of any losses or/and during investment activities.

Furthermore, one more interviewee remarked:

If SOEs have persistent access to monetary subsidies by government, it would be challenging to reorganize and modify the SOEs.

In a nutshell, financial grants and subsidies by the government would be persistent in future. However, it is possible to refine business activities of SOEs by limiting government subsidies; in this way, SOEs would not have any option than to apply market oriented ideologies.

4.1.4 Economic Challenges

4.1.4.1 Poor Financial Management

According to interviewees, there are some other factors which give rise to inefficient business activities of SOEs, such as, lack of financial discipline and practices in form of misuse of monetary possessions and impractical expenses. For instance, in several cases, monetary and capital resources of enterprises are not being utilized in accordance with appropriate measures and principles by their administration personnel. Another reason of weak governance is the absence of audit; accounting and monetary records of most of the SOEs are not being reviewed and validated by an autonomous auditor.

For instance, interviewee claimed:

In numerous cases, expense of the commodities could be inflated more than expectation. Similarly, administration team of particular SOEs is not able to explain those accounting items.

As an advocate of upper-mentioned statement, another interviewee remarked:

A tender was regulated either in a closed concession or narrow manner to acquire office accessories and tools or a construction project (office building); a handful of people took part in that tender as bidders. If we make a comparison between those proposed prices, we get to know that they do not reflect the existing market prices. Certainly, malpractices like these directed not only SOEs towards definite economic losses but also the entire society.

4.1.4.2 Unreliable Accounting Records

Defective and non-transparent accounting records are also likely to contribute in weak monetary discipline and enactment in administration of SOEs. As stated in previous studies, a poor accounting arrangement is one of the primary concerns within SOEs which is expected to be unsettled (Daniel 2000; Suzuki 2002; Thavisay & Quang 1999). Likewise, majority of the interviewees are of the opinion that the precision of accounting practices and records of SOEs are questioned. Primarily, they believe that accounting and monetary data do not accurately depict their financial condition and business performance. The risks related to imprecise financial data visibly hinders the capability of SOEs to gain funds from formal and informal stakeholders. To proof, interviewee 1 identified that:

Due to the dishonest and corrupt actions of administration personnel, great numbers of enterprises are not working with efficacy and consequently they are making losses except few SOEs which are slightly profitable. Moreover, they cooked the books oftenly to conceal the accounting statistics.

In the context of weak accounting figures of a specific SOE, another interviewee said:

An enterprise did not essentially import high-end apparatus but added the false acquisitions in to record as capital expenses. Due to this incompetent and corrupt management, public enterprises in Pakistan is in series of losses.

As far as the SOEs are concerned, various interviewees advised external audits and applicable and attainable internal control strategies should be introduced in order to enhance authenticity, integrity, and clarity of monetary and accounting practices of these SOEs. In this way, they anticipated that these internal controls along with external reviewing strategies would fortify operating and monetary performance.

4.2 Quantitative Analysis

4.2.1 Correlation Matrix

As two indexes (profitability and operational) have also been used to evaluate the performance of state-owned enterprises along with other mentioned factors (structural and

per employee). Further, both indexes comprised of various attributes like attributes taken in profitability index are return on equity, return on assets, profit margin, net income and net profit/loss. Similarly, for operational index, the attributes such as operating loss and outstanding loans are selected. Likewise, structural factor contains only liquidity ratio while per employee factors includes per employee operating expenses and per employee net income, detailed outline given in Table 3.1. Per employee net income used as a measure of employee's productivity, whereas, per employee operating expenses used as a proxy of per employee's cost. As both index has number of factors, therefore, there is high probability of correlation between the variables. Therefore, correlation matrix of factors of both indexes has been estimated and given in Table 5. For that reason, we have done factor analysis and Principal component analysis (PCA) is applied on both indexes to generate a new set of observations and then regression is run on the new data set generated through PCA along with other three variables. The detailed discussion on factor analysis is given in the next sections.

Table 5: Correlation Matrix

	ROA	ROE	NI	NP\L	NPM	OPL	OLS
ROA	1						
ROE	-0.1516	1					
NI	-0.0566	0.0807	1				
NP\L	0.6810	-0.059	0.0552	1			
NPM	0.6180	-0.0478	0.2741	0.7884	1		
OPL	0.6170	-0.1624	-0.1925	0.6131	0.5515	1	
OLS	-0.5471	0.1404	0.2832	-0.5469	-0.461	-0.4484	1

4.2.2 Factor Analysis

The factor analysis has introduced a century ago through the work of Pearson and Spearman; however, empirical utilization of this technique is a contemporary occurrence. As (Kieffer 1999), cited in Henson and Roberts, noted

“Spearman, through his work on personality theory, provided the conceptual and theoretical rationale for both exploratory and confirmatory factor analysis. Despite the fact that the conceptual bases for these methods have been available for many decades, it was not until the wide-spread availability of both the computer and modern statistical software that these analytic techniques were employed with any regularity”.

Basically, factor analysis is contemplated as the technique of choice for illustrating self-reporting questionnaires and it is frequently used approach in the field of education and psychology. Moreover, factor analysis is a multivariate statistical method which is used for various purposes. First and foremost, massive numbers of variable can be reduced into small factors or set of variables through factor analysis. Secondly, it enables the establishment and enhancement of theory as it forms fundamental dimensions among measured variables and latent constructs. Lastly, it offers construct authenticity evidence of self-reporting scales.

Moving on to the types of factor analysis, it can be categorized in to Confirmatory Factor Analysis (CFA), and Exploratory Factor Analysis (EFA). The later has an empirical nature. As it is clear from the name EFA, it is exploratory in nature means researcher does not need to be worried about nature or number of variables. There are five steps of Exploratory Factor Analysis protocol: (1) is the data appropriate for the analysis? (2) how will the factors be extracted? (3) what criteria will be considered while determining the factor extraction? (4) selection of rotational method (5) interpretation and labeling. To answer the question is data appropriate or not we utilized Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. The detail of Principle Component Analysis is given in the next part.

4.2.3 Kaiser-Meyer-Olkin (KMO) and Bartlett's Tests

For the factor analysis, different measures are required to evaluate the appropriateness of the accumulated data, before the extraction of the factors. In this regard, Kaiser-Meyer-Olkin (KMO) method of sampling compatibility and Bartlett's measure of sphericity are popular techniques. Kaiser-Meyer-Olkin index is advised when cases to variable ratio are below 1:5; and its range is 0-1, with 0.5 deemed appropriate for the factor analysis.

KMO test (Kaiser-Meyer-Olkin) is widely used to check the data suitability for factor analysis. As, Bartlett's test of sphericity exhibits the information about a matrix that whether a matrix is an identity matrix or not, suggesting that variables are extraneous (Yoshino and Taghizadeh-Hesary 2015b, 2015a). Moreover, a significant association among variables is depicted by a level of significance less than 0.05. On the other hand, KMO is an estimate of sampling adequacy that reveals the ratio of common variance which possibly be imputed by primary elements (Yoshino and Taghizaden-Hesary, 2014, 2015). The least criteria of usefulness of factor analysis is normally depicted by a KMO value more than 0.60. The estimate(s) of KMO and Bartlett's test are given in Table 6. Both tests have applied for profitability index and operational index.

Table 6: Bartlett Test of Sphericity & KMO

Bartlett Test of Sphericity	
Chi – Square	282.119
Degrees of Freedom	21
P – Value	0.000
Kaiser-Meyer-Olkin Measure of Sampling Adequacy	
KMO	0.747

As we discussed above that a significant association among variables is depicted by a level of significance less than 0.05 and for factor analysis KMO value should be at least 0.6. In Table 3 we can clearly observe that the KMO value is 0.747 and significance level is less than 0.05. Thus, we can proceed for factor analysis. Principle Component Analysis is used as a tool for factor analysis in our study or in other words profitability and operational indexes have developed by utilizing PCA. The next section presents the regression results.

Principle Component Analysis (PCA)

Moving on to the second step of data extraction which can be done through various methods such as Principal Components Analysis (PCA), maximum likelihood, alpha factoring, Principal Axis Factoring (PAF), image factoring, canonical, unweighted least square, and generalized least square. It is apparent through the literature that most popular methods are PCA and PFA; both tests are frequently being argued by researchers about their utilization. Although Thompson claimed that there is no substantial practical variation between both tests; especially when number of variables are 30 or above or when variables are highly consistent. Moreover, Thompson stated that PCA being a preset method in many statistical softwares, is most popular in EFA. Another reason of the popularity of PCA is when there is no priori theory or model is present, PCA is recommended. Similarly, (Pett, Lackey, and Sullivan 2003) also advised PCA in forming initial solutions in EFA.

Principal Component Analysis is used to reduce and excerpts data, take out redundant data, climaxes the concealed features, and envisages the main relations that be existent among observations (Yoshino and Taghizadeh-Hesary 2015b, 2015a). More precisely, it will produce a new set of observations and give emphasize on latent facets after doing simplifications in the data set. One of the main noble features of the PCA is that it does not based on a static set of vectors rather acclimates its elemental vectors based on the nature of

data set. More importantly, another advantage is that the PCA analysis shows the similarities and differences among the various models formed (Ho and Wu 2009).

As a consequence of high correlation among factors the regression analysis by using all these factors is not practicable. Therefore, PCA, a statistical approach has been utilized for transforming the given data into a new set of observations which are linearly uncorrelated. However, before this the suitability of data has been analyzed by employing KMO (Kaiser-Meyer-Olkin) and the sphericity test of Bartlett's also performed. the detail and estimation of both tests have been discussed in the previous section. However, before developing the index of profitability and operational factors the data suitability tests were performed and details & estimation of tests are given in the next section.

4.2.3 Regression Results

This section provides the regression results using the indexes developed through principle component analysis and other variables such as leverage ratio (structural factor) and per employee net expenses (per employee factor). As a result of developing indexes via PCA there is the lack of correlation between the factors. Therefore, ordinary least squares (OLS) method used as a method of estimation. As discussed in chapter 3 that the ultimate goal of this study is to find the factors that are causing in poor performance of state-owned enterprises, or in other words, to find out the factors trailing the success or fiasco of state-owned enterprises. To achieve the objective of the study, various indicators of performance have been utilized and briefly defined in Table 3.1 (Chapter 3). Here, question raised that which factor should be treated as a dependent variable. For this, we selected debt due days as a dependent variable for this analysis. In previous analysis, this variable also treated as the indicator of success or failure of a firm. The dependent variable states that the company is considered default if they delay their repayment of credit over 90. Thus, defaulting of state-owned enterprises is signify the failure of SOEs. Higher debt due days leads to the failure of state-owned enterprises. The results are presented in Table 7.

Table 7: Regression (OLS) Results

Dependent Variable: Debt Due Days (DDDS)				
	Coefficient	Standard Error	t	P > t
Profitability	-0.169	0.077	-2.18	0.032
Operational	0.418	0.082	5.10	0.000
LR	-0.165	0.070	-2.34	0.022
PEOE	0.478	0.78	6.13	0.000
Number of Observation = 70				
F (5,64) = 36.01 Prob > F = 0.0001				
R – Squared = 0.686				
Adj R – Squared = 0.667				
Root MSE = 0.577				

From the above table we can observe that all the variables are statistically significant. Per employee factor and operational indicators are statistically significant at the significance level of one percent, whereas, profitability indicators and leverage ratio are significant at five percent level of significance. The value of beta coefficient of profitability explains that if profitability increased by one unit leads to a decline in debt due days by .169 units.

Similarly, the beta value of leverage ratio indicates that if leverage increased by one unit it implies that the debt due days will decreased by 0.165 units. On the contrary, the operational beta value and per employee beta values shows that if operational factors (outstanding loans and operating losses) and per employee operating expenses increased by one unit will lead to 0.418 and 0.478 units increase in debt due days.

In addition, findings of the analysis revealed that per employee cost (PEOE) has positive and greater impact on the performance of state-owned enterprises. As the cost of per employee increase the income of the firm starts declining which ultimately cause delay in repayment of the credit. In addition, the value of the per employee coefficient evident that it influences the state-owned enterprise’s performance more than any other factor.

Moreover, during interviews with the expert(s) it is also observed that state-owned enterprises are overemployed which causing the performance of state-owned enterprises adversely. Hence, this should come as no surprise that increased costs per employee have a detrimental impact on the performance of state-owned enterprises, and our empirical evidence supports this fact.

Similarly, the operational index which is comprised of outstanding loans and operating loss also has positive and significant impact on debt due days. This can be interpreted as, when the outstanding loans and operating loss increase it leads to increase in debt due days. Which ultimate leads the state-owned enterprises towards defaulter. As in case of Pakistan almost all the state-owned enterprises particularly DISCOs (energy sector) and transportation sector (PIA, NHA, Pakistan Railways) relies heavily on credit and government support. Thus, this hinders the state-owned enterprises to be functional, profitable and sustainable.

On the flip side, profitability and leverage ratio impacts the performance negatively. This is not a rocket science to understand that as the profit of any firm irrespective of the ownership status declined the overall performance of the firms' impacts adversely. This is what exactly happened with state-owned enterprises in Pakistan. The state-owned enterprises are in series of losses from the last couple of years that force the SOEs to be dependent on the credit. This, further cause the delay in repayments of credit that can make the SOEs default.

Moving to the next variable, leverage ratio is used as measure of a firm's ability to meet its obligations. As in our case, the negative singe of the coefficient clearly revealed that state-owned enterprises in Pakistan are not in the position to meet their obligations that cause delay in credit repayments. In addition, it impacting the performance of state-owned enterprises negatively. Thus to be perform well in this study case state-owned enterprises should focus to meet the obligation to avoid become defaulter.

Furthermore, if we look at the size and magnitude of the estimates of each factor is vary across the variables. As depicted in Table 4 per employee operating expenses has the utmost coefficient value that is 0.478. Thus, we can conclude that this could be the one of the main decisive policy tools and it explained that why state-owned enterprises in Pakistan failed to deliver their best in terms of performance. Secondly, operational factors have substantial effect on the performance of state-owned enterprises but relatively less as compared to per employee costs with coefficient value of 0.418. In addition, leverage ratio has medium size impact on the performance with the value of -0.165.

Lastly, the size of the profitability coefficient is lowest with the value of -0.169. Hence, empirical evidence shows that unlike common perception, profitability plays a minor role in determining the loss or success of state-owned enterprises. As per the estimates, per employee costs and operational factors are the key elements in determining why selected state-owned enterprises in Pakistan are facing difficulties in repayment of credit or in other

words why they are facing financial uncertainty. In addition, the structural factor (leverage ratio) and profitability factors have the least deterministic effect on the performance of state-owned enterprises in Pakistan.

CHAPTER 5

CONCLUSION AND SUGGESTIONS

5.1 Qualitative Approach

Public enterprises have a plethora of responsibilities not limited to provision of goods and services which includes water, power, financial support and so on. On the flip side, the poor performance of public enterprises has been the topic of debate, since a couple of decades. In addition, financial setting of several SOEs worsened over time, because of many issues regarding management, policy, and administration which further resulted into substantial fiscal burden for Federal Government and inferior service delivery to the end-user. Therefore, this qualitative analysis of this study provided firsthand information collected from the experts of this area related to the major challenges facing by these enterprises. This analysis broadly covered their perception about the performance of state-owned enterprises and challenges they are facing. It was not a surprise for us that all the interviewees agreed that public enterprises are performing poorly. Further, the causes of their failure were also discussed in detail. All the interviewees unanimously asserted that employee issues and bad governance are the most leading factors behind the failure of these public enterprises, this can be observed in quantitative analysis of this study which confirmed that employee factors are most influential factors behind determining the success or failure of these state-owned enterprises. In addition to these factors, state or political intervention, unclear objectives, state role, poor finance management and unreliable accounting records and government support significantly contribute to the inefficiencies and deprived performance of these public enterprises. The interviewees believed that until the government bring the professional team on ground and without clarifying the role of state, it will remain the wish that state-owned enterprises can be on track. Moreover, they emphasizes to incorporate the advance technology in operational activities to increase the efficiency of public enterprises. To sum up, interviewees suggested that government should act as an owner not as a manager. Moreover, the development of market-based solutions for effectual provision along with institutional measures required consistent reassessment of SOEs to determine their suitability for constant maintenance under government possession. However, unfortunately, the task of such reevaluation of SOEs remained sluggish and motivated by requirements rather than adopting continues development.

5.2 Quantitative Approach

State-owned enterprises assume a vital part in the economy of numerous nations, across the world. As well, in Pakistan, they address a huge portion of the economy. Since SOEs utilize public financing, these kinds of firms are generally thought to be accused of expanding social welfare of the people. Simultaneously, SOEs' performance is largely seen as unremarkable, as their focus stays around improving the social welfare of citizens. Such modest performance may hinder monetary development and even contrarily influence other private firms, making it difficult for them to get to credit. This impact is particularly articulated in nations where SOEs figure fundamentally in the economy. Consequently, it is vital for federal government to execute a far-reaching assessment technique to evaluate the performance of these state-owned enterprises.

In literature, a plethora of studies offered a number of criterions to evaluate the performance of state-owned enterprises, across the globe, however, in case of Pakistan focus of researchers remain on the customer satisfaction or on profit indicators of a single entity or the subject matters. In addition, we believe that profitability is not only the performance criteria but per employee factors, operational and structural indicators or more important tools to assess the performance of SOEs in-depth. Yet, none offered a complete structure of assessment, catching all parts of their performance in case of Pakistan. Due to the data unavailability of some and irresponsible behavior of the authority is official. Therefore, this study only relies on one factor of per employee dimension and similarly in case of structural factors along with profitability and operational indexes.

The index of profitability factors and operational factors were developed by using the principle component analysis, however, the data suitability for factor analysis was also checked. For this, we used Kaiser – Meyer – Olkin (KMO) and Bartlett's test. After developing index to achieve the objective of this part (quantitative analysis) ordinary least squares method was employed.

This analysis aims to evaluate the performance of loss-making SOEs in Pakistan. This study is first kind of attempt to investigate the performance of these loss-making state-owned enterprises in case of Pakistan by utilizing various factors. Such as profitability, per employee variables, operational indicators and structural factors were used to find the leading factors behind the success or loss of these state-owned enterprises. We used five factors in profitability index that are ROA, ROE, net income, net profit/loss and net profit margin. Likewise, in operational factors we used outstanding loans and operating losses. However, per employee effect analyzed by using per employee expenses and similarly,

leverage ratio was used as a measure of structural factor. In addition, debt due days used as a dependent variable.

To evaluate the highly influenced factors on the performance of state-owned enterprises, for this objective, a regression analysis ran employing indices developed by principle component analysis accompanying other factors. The empirical findings reveal that, contrary to the popular belief, per employee variables (operating expenses) and operational indicators (outstanding loans and operating losses) have greater deterministic control over the performance of these state-owned enterprises, contrasted with profitability of the public enterprises. As astronomical expenses are linked to higher probability of state-owned enterprises to be default, on the flip side, high rate of profits, leverage ratio (ability to pay obligations) and lower level of outstanding loans and losses are generally connected with lower dangers of default. Resultantly, this leads to the way to successful state-owned enterprises in Pakistan.

In terms of policy ramifications of this analysis, our regression results offer a glance at the indicators of performance that have the most noteworthy deterministic supremacy in determining whether state-owned enterprises are succeed or not. Although profitability is frequently used as supported marker in evaluating the performance of enterprises, however, the findings of this study uncovered that per employee indicator(s) and operational factor(s) are more conclusive in assessing the performance of state-owned enterprises. Consequently, by using employees efficiently and effectively along with lower level of per employee costs these enterprises can get back on the track that ultimately improve their financial position.

Certainly, it is crucial to note that this analysis utilized the financial data as a foundation of evaluating the performance and that this assessment does not assess their social welfare goals. Governments may find it useful to assess social effect in addition to the financial indicators. Thus, that is the next move for scholars to take.

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APPENDIXES

APPENDIX 1

State – Owned Enterprises (SOEs) is of paramount importance due to their crucial role in providing services and goods around the globe. However, their poor performance always remained in debate of scholars and considered the public enterprises inefficient than their counterparts. Similarly, in Pakistan there are total 212 public enterprises working in diverse sectors of the economy, however, they always questioned due to their low performance in terms of financial indicators along with others. Therefore, in this study top – ten loss making public enterprises have been selected for the analysis based on their outstanding loans and net/profit loss. The names of the selected public enterprise are given in table below. In addition, their average outstanding loans and net/profit loss (from 2013 to 2019) are depicted in the given graph. As the graph clearly illustrates that, the top three poorest public enterprises in terms of outstanding loans are Pakistan International Airlines Corporation, Peshawar Electric Supply Company and Quetta Electric Supply Company, respectively. Similarly, in terms of net profit/loss making public enterprises; the top three poorest state – owned enterprises are Pakistan International Airlines Corporation, Multan Electric Power Company and Quetta Electric Supply Company, respectively.

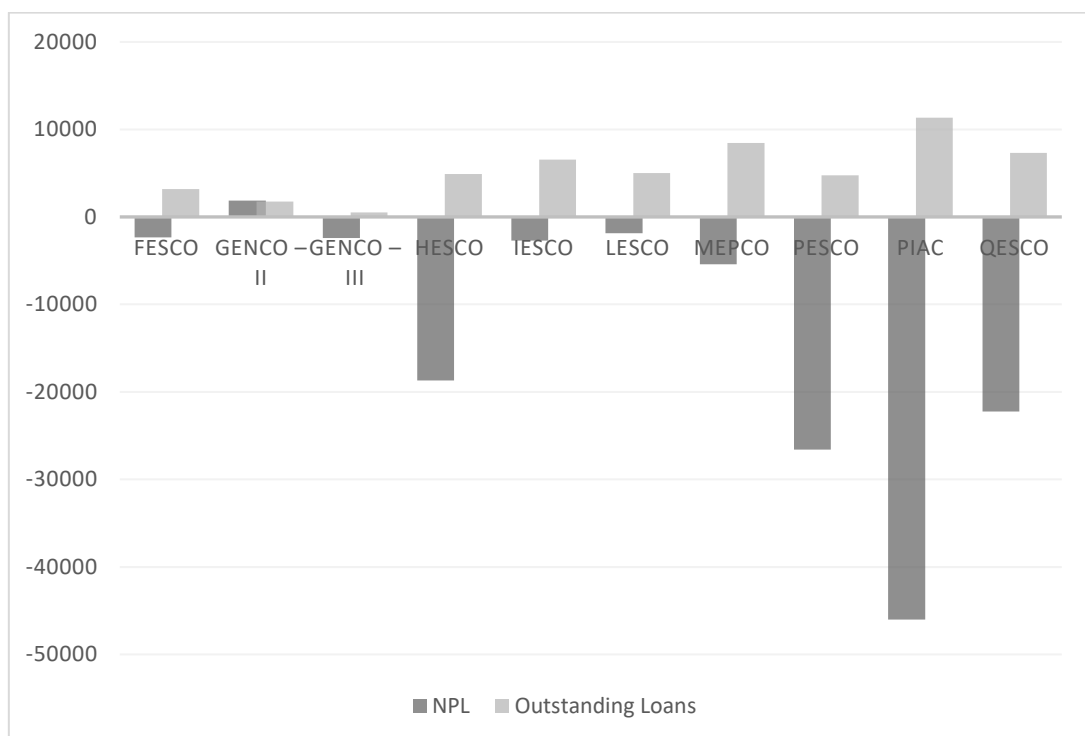


Figure 4: Outstanding Loans & Net Profit/Loss

Table 8: Selected State - Owned Enterprises

FESCO	Faisalabad Electric Supply Company
GENCO – II	Generation Companies
GENCO – III	Generation Companies
HESCO	Hyderabad Electric Supply Company
IESCO	Islamabad Electric Supply Company
LESCO	Lahore Electric Supply Company
MEPCO	Multan Electric Power Company
PESCO	Peshawar Electric Supply Company
PIAC	Pakistan International Airlines Corporation
QESCO	Quetta Electric Supply Company