

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**ROLE OF INTELLECTUAL CAPITAL AND CORPORATE
GOVERNANCE TOWARD STATE-OWNED ENTERPRISES
PERFORMANCE: MODERATING ROLE OF GOVERNMENT
INTERVENTION**



By

Muhammad Noman Yaseen

**DOCTOR OF PHILOSOPHY
UNIVERSITI UTARA MALAYSIA
2023**

**ROLE OF INTELLECTUAL CAPITAL AND CORPORATE
GOVERNANCE ON FINANCIAL AND NON-FINANCIAL
PERFORMANCE OF STATE-OWNED ENTERPRISES:
MODERATING ROLE OF GOVERNMENT INTERVENTION**



By

Muhammad Noman Yaseen

**A thesis submitted to the Ghazali Shafie Graduate School of Government in
fulfilment of the requirements for the Doctor of Philosophy/Doctor of
Management Universiti Utara Malaysia**



Kolej Undang-Undang, Kerajaan dan Pengajian Antarabangsa
(College of Law, Government and International Studies)
UNIVERSITI UTARA MALAYSIA

PERAKUAN KERJA TESIS / DISERTASI
(Certification of thesis / dissertation)

Kami, yang bertandatangan, memperakukan bahawa
(We, the undersigned, certify that)

MUHAMMAD NOMAN YASEEN (903592)

calon untuk Ijazah
(candidate for the degree of)

DOKTOR FALSAFAH (PENGURUSAN AWAM)

telah mengemukakan tesis / disertasi yang bertajuk:
(has presented his/her thesis / dissertation of the following title):

**ROLE OF INTELLECTUAL CAPITAL AND CORPORATE GOVERNANCE TOWARD
STATE-OWNED ENTERPRISES PERFORMANCE: MODERATING ROLE OF
GOVERNMENT INTERVENTION**

seperti yang tercatat di muka surat tajuk dan kulit tesis / disertasi.
(as it appears on the title page and front cover of the thesis / dissertation).

Bahawa tesis/disertasi tersebut boleh diterima dari segi bentuk serta kandungan dan meliputi bidang ilmu dengan memuaskan, sebagaimana yang ditunjukkan oleh calon dalam ujian lisan yang diadakan pada **2 OKTOBER 2022**

*That the said thesis/dissertation is acceptable in form and content and displays a satisfactory knowledge of the field of study as demonstrated by the candidate through an oral examination held on: **OCTOBER 2, 2022***

Pengerusi Viva
(Chairman for Viva)

: **PROF. MADYA DR.
ZAINAL MD. ZAN**

Tandatangan
(Signature)

Pemeriksa Luar
(External Examiner)

: **PROF DATO' DR
NASRUDIN
MOHAMMED
(AKEPT)**

Tandatangan
(Signature)

Pemeriksa Dalam
(Internal Examiner)

: **DR. LOW KAH
CHOON**

Tandatangan
(Signature)

Tarikh
Date

: **2 OKTOBER 2022**

Nama Pelajar
(Name of Student) : **MUHAMMAD NOMAN YASEEN (903592)**

Tajuk Tesis
(Title of the Thesis) : **ROLE OF INTELLECTUAL CAPITAL AND CORPORATE
GOVERNANCE TOWARD STATE-OWNED ENTERPRISES
PERFORMANCE: MODERATING ROLE OF GOVERNMENT
INTERVENTION**

Program Pengajian
(Programme of Study) : **DOKTOR FALSAFAH (PENGURUSAN AWAM)**

Penyelia Pertama
(First Supervisor) : **PROF. MADYA DR.
BADARIAH HAJI DIN**

Tandatangan
(Signature)



UUM
Universiti Utara Malaysia

Permission to Use

In presenting this thesis in partial fulfillment of the requirement for PhD degree from Universiti Utara Malaysia, I agree that the University Library may make it freely available for inspection. I further agree that permission for copying of this thesis in any manner either in whole or in part, for scholarly purpose may be granted by my supervisor or in his absence, by the Dean, Ghazali Shafie Graduate School of Government, UUM College of Law, Government and International Studies (UUM COLGIS). It is understood that any copying or publication or use of this thesis or part thereof for financial gain shall not be allowed without my written permission. It is also understood that due recognition shall be given to me and to the Universiti Utara Malaysia for any scholarly use which may be made of any material from this thesis.

Request for permission to copy or to make use of material in this thesis, in whole or in part, should be addressed to:



Dean (Ghazali Shafie Graduate School of Government)

UUM College of Law, Government and International Studies (UUM COLGIS)

Universiti Utara Malaysia

06010 UUM Sintok

Abstract

State owned enterprises' performance have been a topic of discussion among researchers, especially in the context of emerging economies such as Pakistan. Numerous aspects that have a strong impact on state owned enterprises' financial performance and non-financial performance have been recognized. Describing all issues related to state owned enterprises' financial performance and non-financial performance with the assistance of a single theory is a challenge because several factors affect the performance of these state owned enterprises. Meanwhile, several theories exist in the literature that can explain and forecast the performance of state owned enterprises. Therefore, on the basis of resource base theory, agency theory, and resource dependency theory, this study aims to examine the role of intellectual capital and corporate governance on state owned enterprises' financial and non-financial performance in Pakistan with the moderating role of government intervention. Data were collected from the top management of state owned enterprises in Pakistan. Data were analysed through structural equation modelling using SmartPLS. Results show the significant impact of gender diversity on state owned enterprises' financial performance, while the independence of committee has a significant influence on state owned enterprises' non-financial performance. Further, the results demonstrated the moderating role of government interventions between the proposed innovation capability and state owned enterprises' non-financial performance. This thesis has made an important contribution both theoretically and practically. This study empirically tested the combined effect of corporate governance and intellectual capital on the financial and non-financial performance of state owned enterprises in Pakistan. In addition, this study analysed the moderating effect of government intervention, which had not been previously analysed. Moreover, the results of this study have practical implications for the Pakistani regulatory authorities in establishing and revising corporate governance practice standards that are tailored to Pakistan's unique background. The future direction of this research can be developed by changing or adding variables and broadening its scope.

Keywords: Intellectual Capital, Corporate Governance, Government Intervention, State Owned Enterprises Performance, Pakistan

Abstrak

Prestasi syarikat milik negara telah menjadi topik perbincangan di kalangan penyelidik, terutama dalam konteks ekonomi baru seperti Pakistan. Banyak aspek yang mempunyai impak yang kuat terhadap prestasi kewangan dan prestasi bukan kewangan syarikat milik negara telah dikenal pasti. Untuk menjelaskan semua isu yang berkaitan dengan prestasi kewangan dan bukan kewangan syarikat milik negara dengan menggunakan hanya satu teori tunggal adalah mencabar kerana beberapa faktor mempengaruhi prestasi syarikat milik negara. Sementara itu, terdapat beberapa teori dalam literatur yang dapat menjelaskan dan meramalkan prestasi syarikat milik negara. Oleh itu, berdasarkan teori sumber asas, teori agensi, dan teori ketergantungan sumber, kajian ini bertujuan untuk mengkaji peranan modal intelektual dan tadbir urus korporat dalam prestasi kewangan dan bukan kewangan syarikat milik negara di Pakistan dengan peranan pengantaraan campur tangan kerajaan. Data kajian dikumpul dari pengurusan tertinggi syarikat milik negara di Pakistan. Data dianalisis melalui pemodelan persamaan berstruktur menggunakan SmartPLS. Hasil kajian menunjukkan kesan signifikan kepelbagaian jantina terhadap prestasi kewangan syarikat milik negara, manakala kebebasan jawatankuasa mempunyai pengaruh yang signifikan terhadap prestasi bukan kewangan syarikat milik negara. Selain itu, hasil kajian menunjukkan peranan pengantaraan campur tangan kerajaan antara kemampuan inovasi yang dicadangkan dan prestasi bukan kewangan syarikat milik negara. Tesis ini memberi sumbangan penting dari segi teori dan praktikal. Kajian ini menguji secara empirikal kesan gabungan tadbir urus korporat dan modal intelektual terhadap prestasi kewangan dan bukan kewangan syarikat milik negara di Pakistan. Selain itu, kajian ini juga menganalisa kesan pengantaraan campur tangan kerajaan, yang sebelum ini tidak dianalisa. Selain itu, hasil kajian ini mempunyai implikasi praktikal bagi penguasa peraturan Pakistan dalam menetapkan dan meninjau standard amalan tadbir urus korporat yang sesuai dengan latar belakang unik Pakistan. Arah masa depan penyelidikan ini dapat dikembangkan dengan mengubah atau menambah pembolehubah serta meluaskan skopnya.

Kata Kunci: Modal Intelektual, Tadbir Urus Korporat, Intervensi Kerajaan, Prestasi Syarikat Milik Kerajaan, Pakistan

Acknowledgement

First of all, I pay my gratitude to Almighty Allah without whom there is none who can really understand and help us when we are in the deep troubles and sorrows. Almighty! Thanks for your kindness and graciousness to endow me the strength to complete this humble piece of research through which I have learned how I can be useful to your creation.

Then I would like to thank my parents, brothers, sisters, teachers and friends for their continuous support, encouragement, and prayers for my educational career. The Biggest thanks to my Mother and Father Muhammad Yaseen Asim (Late). Both supported me a lot in every aspect of my life and especially during my PhD they guided me the way of patience. I am also thankful to my elder brothers Mr. Kamran Yaseen, Mr. Adnan Yaseen, Mr. Zeshan Yaseen, and Mr. Ferhan Yaseen for their encouragement and support. The biggest thanks, appreciation, and gratitude go to my wife Mussarat Noman and my sons Muhammad Ahmad, Muhammad Wali Mehrab, and beloved daughter Khajida Fatima who have suffered a lot during this journey and without their continuous support and inspiration, I could not complete this thesis. May Allah bless them all for their well wishes and prayers for my success. I am also very thankful to my grandfather Baba Sain Ghulam Muhammad, and my elder sister Saima Yaseen for their keen interest in my early studies and great contribution in my PhD endeavour. I found no words to pay my gratitude to my friends Dr. Irshad Hussain Sarki, Dr. Sajjad Nawaz, and Dr. Imran Arshad who have been very helping with their thought-provoking feedback on my research

problematic, throughout my PhD work. I am also thankful to Dr. Munir Ahmad and Dr. Sajjad for his valuable support in every time during this period of study.

I would pay my humble gratitude to my supervisors Professor Madya Dr. Badariah Binti Haji Din for their continuous guidance, support, and encouragement throughout the period of my stay here at UUM, Malaysia. I have no words to explain their contribution in my research work and I am proud of working with her. During this thesis, I have had many thought-provoking discussions with Professor Madya Dr. Badariah Binti Haji Din that have led me towards concluding my research work. I remember many times when I was stuck up and she guided and helped me to come out of the troubles and move in the right direction. So, I pay my heartiest gratitude to her and pray for her health and prosperous family life.

My heartiest thanks and gratitude go to my friends and senior colleagues here especially Dr. Mazhar Abbas, Dr. Ashraf Ul Haq, Dr. Hamid Waqas, Dr. Ehsan Ul Hassan, Dr. Rashid, Dr. Shahid, Dr. Umar Draz, Dr. Asad Afzal Humayon, Dr. Sahid Nawaz, Mr. Majid Iqbal, Mr. Kashif Saghai, Mr. Owais and Mr. Adnan Maqbool. However, special thanks go to my Colleagues, Dr. Qasim Ali Qureshi, Dr. Fahim Javed, Dr. Sohail Tahir, Mr Rafique Khuhro, Dr. Imran Khan, Mr. Asad Abbas Sargana, Rao Zahid and Mr. Yasir Ikram, with whom my interaction has been multi-layered and profound. They have supported and helped me a lot and I am very inspired from them. I have learned a lot from them, hence, owe special thanks to them.

Table of Contents

Permission to Use	iii
Abstract.....	iv
Abstrak.....	v
Acknowledgement	vi
Table of Contents	viii
List of Tables	xiii
List of Figures.....	xv
List of Abbreviation	xvi
CHAPTER ONE	1
INTRODUCTION.....	1
1.1 Background of the study.....	1
1.2 Problem Statement	5
1.3 Research Question.....	15
1.4 Research Objective.....	15
1.5 Scope of Research	16
1.6 Significance of Research	18
1.7 Organization of the Study.....	22
1.8 Summary	24
CHAPTER TWO LITERATURE REVIEW	25
2.1 Introduction	25

2.2	Overview of SOEs Performance.....	25
2.3	Overview of Intellectual capital	29
2.3.1	Human Capital	30
2.3.2	Customer Capital.....	31
2.3.3	Structural Capital	32
2.3.4	Innovation Capability.....	33
2.4	Overview of Corporate Governance.....	35
2.4.1	Independent Directors	38
2.4.2	Management Board Size	39
2.4.3	Management Board Meetings	41
2.4.4	Gender Diversity	42
2.4.5	Independence of committee	45
2.4.6	Audit committee meeting.....	46
2.5	Government Intervention	48
2.6	Underlying Theories.....	53
2.6.1	Agency Theory	53
2.6.2	Resource-based Theory.....	57
2.6.3	Resource Dependence Theory.....	60
2.7	Research Framework.....	62
2.8	Hypotheses Development.....	66
2.8.1	Human Capital and SOEs Performance	67
2.8.2	Customer Capital and SOEs Performance	69
2.8.3	Structural Capital and SOEs Performance	71
2.8.4	Innovation Capability and SOEs Performance	73
2.8.5	Independent Director and SOEs Performance	75
2.8.6	Management Board Size and SOEs performance.....	77
2.8.7	Management Board Meeting and Performance of the SOE.....	79
2.8.8	Gender diversity and SOEs performance.....	81
2.8.9	Independence of committee and SOEs Performance	84
2.8.10	Audit committee meeting and SOEs Performance	86
2.9	Moderating Role of Government Intervention between Intellectual Capital, Corporate Governance and SOEs Performance	89
2.10	Summary.....	99

CHAPTER THREE RESEARCH METHODOLOGY	101
3.1 Introduction	101
3.2 Research Philosophy	101
3.2.1 Ontology	102
3.2.2 Epistemology	103
3.3 Research Design	107
3.4 Operationalization and Measurement of variables	108
3.4.1 Intellectual Capital	109
3.4.2 Corporate Governance	111
3.4.3 Government Intervention	114
3.4.4 SOEs Performance	115
3.5 Sampling process	116
3.5.1 Population:	117
3.5.2 Sampling Procedure	118
3.5.3 Sampling Criteria	122
3.5.4 Sample Size	124
3.5.5 Execute the Sample Process/Response Rate	125
3.5.6 Control for Measurement Error	125
3.6 Data Analysis Strategy	127
3.6.1 Structural Equation Modelling (SEM)	128
3.6.1 Content and Face Validity	132
3.6.2 Pilot Study	133
3.6.3 Reliability Test	134
3.6.4 Construct Validity	135
3.7 Ethical Considerations	142
3.8 Summary	143
CHAPTER FOUR	144
FINDINGS	144
4.1 Introduction	144
4.2 Analysis of Survey Response	145
4.2.1 Response Rates	145

4.2.2 Test of Non-Respondent Bias	146
4.3 Preliminary Analysis	149
4.3.1 Missing Values Analysis	150
4.3.2 Outliers Assessment	151
4.3.3 Data Normality Assessment	152
4.3.4 Multi-collinearity Analysis	155
4.4 Descriptive Analysis	160
4.4.1 Profile of Respondents	161
4.5 Assessment of PLS-SEM Path Model	162
4.6 Assessment of Measurement Model	164
4.6.1 Individual Item Reliability	164
4.6.2 Internal Consistency Reliability	165
4.6.3 Convergent Validity	170
4.6.4 Discriminant Validity	171
4.7 Assessment of Significance of the Structural Model	180
4.7.1 Assessment of (R^2)	191
4.7.2 Assessment of Effect Size (f^2)	192
4.7.3 Assessment of Predictive Relevance	192
4.6.5 Assessment of nonlinear effects	194
4.6.6 Endogeneity Gaussian Copula	195
4.6.7 Assessment of unobserved heterogeneity	196
4.8 Summary	199
CHAPTER FIVE	200
DISCUSSION AND RECOMMENDATIONS	200
5.0 Introductions	200
5.1 Summary of Results	200
5.2 Discussion on Key Findings	201
5.2.1 Intellectual Capital and SOEs Financial and Non-Financial Performance 202	
5.2.2 Impact of Corporate Governance on SOEs Financial and Non-Financial Performance	208

5.2.3. Moderating Effect of Government Intervention on Relationship between Intellectual Capital, Corporate Governance and SOEs Financial and Non-Financial Performance	216
5.3 Theoretical and practical implications of the Study	221
5.3.1 Theoretical Implications.....	222
5.3.2 Practical Implications.....	226
5.4 Limitations and future research recommendations.....	230
5.5 Conclusion.....	231
REFERENCES.....	232
APPENDICES A	267
APPENDICES B	274
APPENDICES C	291
APPENDICES D	292



List of Tables

TABLE 1.1 SOEs Sectorial Classification (FY 2018-19)	6
TABLE 2.1 Studies linking Intellectual Capital with performance.....	34
TABLE 2.2 Studies linking Corporate Governance with performance	47
TABLE 3. 1 Summary of measurement	115
TABLE 3. 2 Total Population Sector wise	121
TABLE 3. 3 Response from Respondents	124
TABLE 3. 4 Cronbach's alpha coefficient	134
TABLE 3. 5 Factor Loading and Reliability.....	138
TABLE 4. 1 Number of Responses and response rate	145
TABLE 4. 2 Test of Non-Respondent Bias	148
TABLE 4. 3 Skewness and Kurtosis	155
TABLE 4. 4 Correlation Matrix of the Exogenous Latent Constructs	159
TABLE 4. 5 Tolerance and Variance Inflation Factors (VIF)	160
TABLE 4. 6 Profile of the Respondents	162
TABLE 4. 7 Loadings, Composite Reliability and Average Variance Extracted..	170
TABLE 4. 8 HTMT Ratio	174
TABLE 4. 9 Cross Loadings	175
TABLE 4. 10 Structural Model Assessment	189
TABLE 4. 11 Variance Explained in the Endogenous Latent Variable	192
TABLE 4. 12 Effect Sizes of the Latent Variables	193
TABLE 4. 13 Predictive Relevance	194
TABLE 4. 14 Non-linear Ramsey Test.....	195

Table 4.15 Gaussian Copula.....	197
Table 4.16 Fit indices for the one- to three-segment solutions.....	199
Table 4.16 Relative segment sizes.....	199



List of Figures

Figure 1.1 Net Profit/Loss of SOEs (FY 2014-19).....	8
Figure 2.1 Theoretical Framework Figure.....	64
Figure 4. 1 Normal Probability Plot and Histogram	154
Figure 4. 2 Normal Probability Plot and Histogram	154
Figure 4. 3 PLS Path Modelling Assessment (Two-Step Process).....	164
Figure 4. 4 Factor Loading	168
Figure 4. 5 PLS Bootstrapping (t-value) for the Study Model	181
Figure 4.6 Moderation Effect.....	185



List of Abbreviation

SOE	State Owned Enterprise
SOEFP	State Owned Enterprise Financial Performance
SOENFP	State Owned Enterprise Non-Financial Performance
INC	Intellectual Capital
HC	Human Capital
CC	Customer Capital
SC	Structural Capital
IC	Innovation Capability
CG	Corporate Governance
ID	Independent Director
MBS	Management Board Size
MBM	Management Board Meeting
GD	Gender diversity
IOC	Independence of Committee
ACM	Audit committee meeting
GI	Government intervention
RBV	Resource Based View
BOD	Board of Director
SECP	Security Exchange Commission of Pakistan

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Globalization's effects are causing quick changes in a variety of situations, including technological, social, economic and political contexts. Exceptional movement of capital, goods, services and people represents the borderless activities due to globalization. Nowadays countries are more-free to trade and due to this open trade, it is more difficult to achieve competitive growth by the firms. Due to trade openness, state-owned enterprises (hereafter SOEs) face a different kinds of challenges. The era of SOEs spread over a period, and across the world, they developed over time and evolved to serve the economies not even developed but especially less developed economies.

SOEs in many countries are facing exceptional challenges due to reforms in the governance system that generate more problems as compared to the private sector. These problems may be related to the transparency, and institutional or may be the objectivity of these SOEs (Apriliyanti & Kristiansen, 2019). Therefore, it is the responsibility of the government to show seriousness regarding to improve the performance of SOEs (Apriliyanti & Kristiansen, 2019). Shi et al. (2016) notes that state-owned enterprises from China, for instance, have become increasingly competitive on a global scale, with some ranking among the world's largest corporations. Therefore, effective management and governance of SOEs are important

policy concerns for developing countries like Pakistan because SOEs perform dual responsibilities one is the social and second commercial which can be contrary.

This issue cannot be resolved even government fully managed these SOEs but in 1986 in New Zealand reforms were implemented completely regarding the governance of corporations. As a result, state corporations provided a lower cost of goods and services meanwhile productivity increased. Kuzman et al. (2018) and Wong (2004) related that Sweden also introduced governance reforms in 1999 and the major goal of these reforms is to convert SOEs into commercial entities and these entities are well-organized to cope with financial matters. Especially in the last two decades, privatization has been extensive but still, SOEs considered key economic pillars in many countries. The role of SOEs remains substantial for developing countries such as Malaysia, Bangladesh, Indonesia, Russia, Pakistan and India. Such enterprises play a big part in the economies of numerous nations either these corporations are fully owned by the government or privatized entities are trying to increase commercial activities beyond national borders (Carney et al., 2019; Globerman & Shapiro, 2008; Kim, 2021; Mariotti & Marzano, 2021). These state enterprises can expand their business structure to become bigger corporations, due to this ability they can intervene not only national level but also in global markets. For instance, In the United Kingdom, China mobile has greater market capitalization as compared to Vodafone.

Change in the structure of ownership in China's state entities showed a critical performance in the economy of China and considered such model alternatively by the policy makers those who still don't want change in the ownership structure (Aivazian et al., 2005). A country, like Singapore, is well renowned for productivity, Wicaksono (2009) heavily rely on the

performance of SOEs because SOEs are not only famous to break the monopoly but also create more wealth and generate more profit even more than their counterparts.

Regardless of the generally negative perception about the SOEs' performance, both financially and otherwise, which is tied to the issue of ownership structure, there are numerous examples that these SOEs continuously maintain their decent outcome over a lengthy period of time. There are few enterprises that have won rewards for their excellent performance such Renault by French group, Singapore Airlines, Brazil's Embraer, POSCO by Korean and transport authority in India.

The Government of Qatar holds the majority of shares in Qatar Airlines, which played a significant part in boosting the nation's economy and won the title for finest airline in the world in 2011. SOEs played a key role not only in the economy of the Organization of Economic Cooperation and Development (OECD) but also generate employment and enhancing the volume of market capitalization.

Regardless of their proven importance, SOEs have a long history of poor performance in Pakistan. This poor performance is based on several reasons just like imprecisely government interventions along the lines of inefficiencies inherent in the enterprises. For decades, many countries are trying to revisit their policies regarding SOEs and want to abandon what is no longer their jobs. Most the countries handed over their SOEs to the private sector due to their unhealthy activities and continuously bearing loss. If SOEs maintain accountability, transparency, productivity, capability, and value of money then these SOEs consider the public sector companies. Some are important due to their

strategic position, and some are due to their socio-economic activities. So, this type of SOEs will be part of public sector companies.

Similarly, Bokhari (1998) stated that in Pakistan importance of SOEs increased due to the unsuccessful experience of privatization. Privatization involved procedural complications as well as the public and political influence that affect this process (Babic, 2021). Moreover, Khan (2008) and Raza et al. (2021) explained that due to strategic conditions many countries don't try to privatize their SOEs.

Due to reforms in the governance system SOEs in Pakistan facing a unique challenge and made their path difficult when compared with the private sector. These governance reforms in State entities have directly linked the issue of transparency, innovation capability (hereafter IC), productivity, government intervention, intellectual personals, and objectivity. These issues are addressed when the government shows a serious attitude to improve the enterprises performance.

The management of SOEs' changed remarkably and amended its internal governance system in many ways. For instance, recruitment of independent directors (hereafter ID), the inclusion of female directors and more focus on intellectuals are beneficial steps for the betterment of SOEs. Intellectuals are considered a great asset not only for the organizations but also for the nation. Many organizations invested more and more in the intellectual capital (hereafter INC) because they enhance the value of the organization and create a competitive lead in a knowledge-based modern economy (Aslam & Haron, 2020; Chiucchi & Giuliani, 2022; Kengatharan, 2019; Saeidi et al., 2021; Sardo et al., 2018; Smaguc, 2021). This statement

reinforces the principle of separating control and ownership. This is in line with the view that a governance system is run by the intellectuals that build the confidence of investors. Sturm and Nüesch (2019) describe that good corporate governance (hereafter CG) can enhance the performance of enterprises. Similarly, Fatima et al. (2018) highlighted that enterprises working in Pakistan performed poorly because of the weak governance system and lack of intellectual personnel. Moreover, literature provides varied outcomes on the influence of CG and INC on the corporations' performance.

The importance of corporate governance (McGee & Bose) and (INC) in enhancing a firm's competitive gain and contributing to the economy of a nation cannot be overstated. To improve the financial and non-financial performance (NFP) of firms, it is crucial to understand the intricacies of both constructs. This study aims to explore the role of CG and INC and identify any gaps that exist between them, with the ultimate goal of enhancing the financial and NFP of State-Owned Enterprises.

1.2 Problem Statement

SOEs in Pakistan are generally governed by the government and conduct their business in various areas. Table 1.1 showed that 212 state corporations are engaged in various industries and in these 212 corporations 424,505 people are employed at the end of 2019. SOEs' have a great influence on the economy of Pakistan. These SOEs' largely fall in the key sectors of the economy namely, energy, promotional and advocacy organizations, industrial and engineering, transportation, commercial and non-commercial financial institutions, trading and services.

Table 1.1**SOEs Sectorial Classification (FY 2018-19)**

Catagories	Number
Energy	41
Financial	33
Industrial & Engineering	20
Promotional & Advocacy	46
Services	26
Trading	05
Transportation	35
Miscellaneous	06
Total Number of SOEs	212

Source: Pakistan Stock Exchange

SOE performance has been a topic of discussion among researchers, especially in the context of emerging economies where it has been associated with frauds and governance failures, as noted by Arora and Sharma (2016) and Schäuble (2019). Okhmatovskiy (2010) explains that SOEs in Norway play an important role in the market and act as a counterbalance to private corporations. The author argues that these SOEs are crucial not only for the economy but also for avoiding monopolistic practices. SOEs are established by the government for the purpose of reallocation and, in some cases, for achieving absolute returns.

In Europe, SOEs' are viewed as being extremely significant as suppliers of public goods and services including electricity, water, transportation, and cultural, social and recreational offerings to large part of the population (Alexius et al., 2015; Grossi et al., 2015). Public authorities allocate a large amount of funds indirectly to SOEs' of federal

states. Therefore, public authorities have stronger influences on such enterprises due to contribution in the capital.

Due to the major shareholders of the enterprises, public authorities hold the recruitment decisions and appoint the members of the board (Grossi et al., 2015). Public authorities are the majority shareholders, they should consider SOE performance when making decisions to ensure public CG. For transparency and accountability to the public, authorities place a premium on quantifiable performance, both financial and non-financial.(Ball & Bebbington, 2008; Uyar et al., 2021).

The federal government as well as individual politicians use SOEs as an instrument to attain their political goals. Political leadership derailed the initiatives of SOEs on the topic of best utilizations of human resources just to protect their political loss (Apriliyanti & Kristiansen, 2019; Apriliyanti & Randøy, 2019; Babic, 2021; Szarzec et al., 2022). Such as, in 2011 Government of Pakistan regularized the thousands of contractual employees without calculating the financial burden and operational issues that will be faced by different state organizations for instance PIA, PSM and PR (FY 2016-2017). This kind of traditional tack ticks only can be removed through SOE reforms.

Due to this, the performance of SOEs' is decreasing during last several decades due to high competition fuelled by de-regulations, and privatization (Rygh, 2019; Tihanyi et al., 2019). Although due to weak governance, many SOEs have been unsuccessful to achieve these capacities and became a financial burden. Similarly, in Pakistan, almost every SOEs become a burden on the budget of Pakistan. Poor performance of the SOEs is depicted in figure 1.1

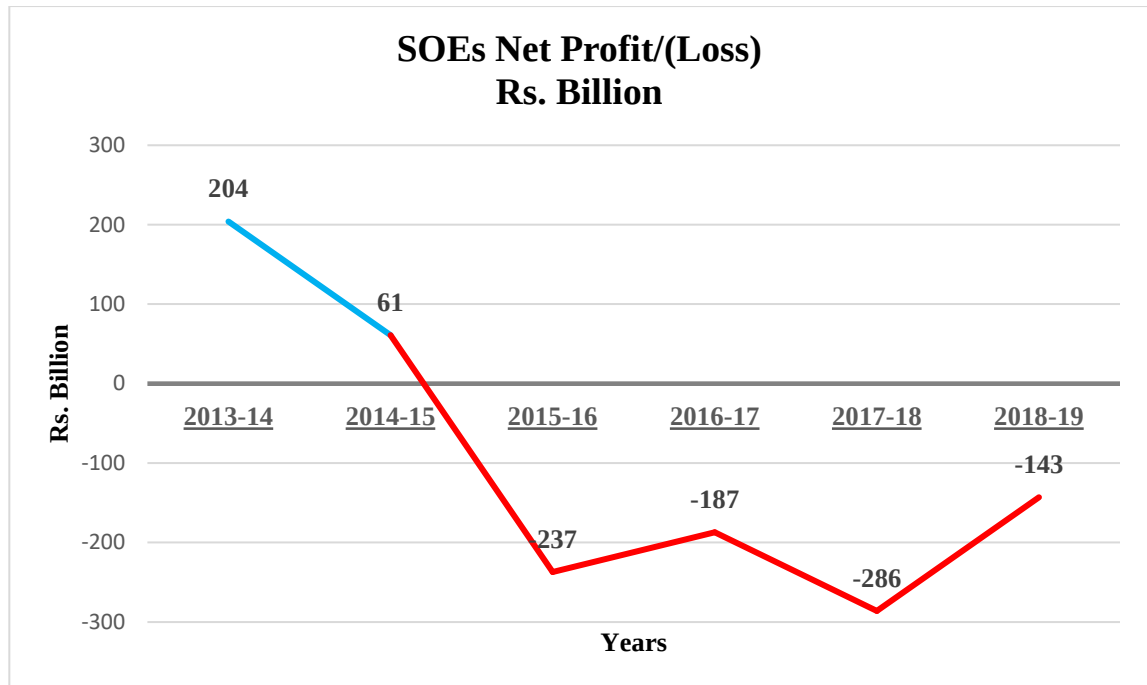


Figure 1.1 Net Profit/Loss of SOEs (FY 2014-19)

Democratic governments tried not to go for restructuring in SOEs because downsizing and job insecurity will create panic in the public. These democratic governments avoid the reaction of the public and wait for a big crisis as done previously in Pakistan International Airlines Rehman, (2019) which had Rs. 32.1 billion accumulated loss in FY 2014 (FY 2015-2016).

The situation of SOEs presents exceptional circumstances as debated earlier, there are some SOEs that performed exceptionally well (Qatar Airlines, Singapore Airlines). Whereas, some SOEs performed not up to the mark and consider them failed continuously. Some of these SOEs had performed exceptionally in some years as well as in some years performance is not up to the mark for instance Botswana Power and Botswana Telecom Corporations are examples in this regard. Still, SOEs cannot excel along only one dimension, but they have to

try and improve along multiple dimensions to achieve their competitive advantage to sustain in this competitive world. In other words, SOEs must identify those areas in which they will improve and achieve the goals of sustainability. Given this perspective of the significance of the competitive advantage of SOEs, the oft-repeated question is what factors influence SOEs' performance, operate in the same context? This broad question forms the basis of this research.

Literature has described that performance of some SOEs are worst comparable to the private enterprises (Aguilera et al., 2021; Boardman & Vining, 1989; Lazzarini & Musacchio, 2018; Megginson & Netter, 2001; Vining & Boardman, 1992). Various reports are available that provide guidance to the policymakers to improve the performance of the SOEs'. Available reports depicts clear information about the financial performance (hereafter FP), containing traditional financial inputs such as subsidies and information about financial outcome such as profit. Such reports include the measures of NFP and deliver the evidence about SOEs' organizational structure, employees' situations and intensity of service fulfilment.

Literature has demonstrated the hybrid nature of the enterprises (Alexius et al., 2015). Hybrid enterprise have unique organizations goals that show different meanings to the different individuals. However, challenging organizational logics cause compromises between execution aspects; in the public area and particularly with regards to SOEs, clashes regularly exist between a public-area rationale focusing the delivery of service and a private-area rationale imitating to produce income (Beaton et al., 2021; Zaccone et al., 2022).

Research additionally shows that leaders in the private area depends on the financial statistics as compared to the non-financial evidence (Lindermüller et al., 2020; Monteiro et al., 2022) and there is a reverse phenomenon for the public sector enterprises (Budding et al., 2021; Hu & Liu, 2022).. Numerous studies have shown that policy makers face hurdles in increasing the efficiency and allocation of the resources when a firm is facing poor financial conditions (Raudla, 2022).

In previous studies, numerous aspects have been recognised that have a strong impact on SOEs financial performance and non-financial performance. It is clearly stated that describing all issues related to SOEFP and SOENFP with the assistance of a single theory is not an easy job. Because several factors affect the performance of these SOEs. Meanwhile, several theories exist in the literature that can explain, and forecast the performance of SOEs.

Numerous theories are available for explain and predicting the nature of SOEs' performances. Hence there exist a gap in the studies and in this study three distinct theories have been uses to demonstrate the nature of relationships between the variables for enhancing the performance of SOEs'. The three theories such as "Agency theory" (Jensen & Meckling, 1976), the "Resource-based theory" (Wernerfelt, 1984) and "Resource dependency theory" (Pfeffer & Salancik, 1978). Previous studies have focused on studying CG, INC and the collaborative/ independent performance assessment of SOEs (Daiser et al., 2017; Elfgren & Persson, 2019; Grossi et al., 2015; Holland, 2019; Kalasin et al., 2019; Megginson & Netter, 2001). INC efficiency and strong CG both collectively mitigate the conflict of interest (Jensen & Meckling, 1976; Khan & Ali) (Jensen & Meckling, 1976; Khan & Ali, 2017).

Several studies reveal to enhance the performance of the organization, it is essential that INC and BOG indeed need to be integrated. Firstly, Ji et al. (2019) and Musleh Alsartawi (2019) to enhance the performance of an organization BOG meetings must conduct, and meetings have done continuously basis. In the absence of intellectuals, these meetings are not fruitful for the organization. Secondly, Xu (2018) proposed that in preparation of organizational policies board of directors (hereafter BOD) as well as intellectual managers provide advice to top management regarding organizational policies that are beneficial for the organization and employees. As stated by the author for the betterment of financial results it is ensured that within an organization there is a collaborative work environment that satisfies the high-level human capital (hereafter HC). Thirdly, INC has evolved into its third stage as stated by (Casonato et al., 2019). In the third stage of evolution, an IC firm has to see the practical implication and it is essential how much the intellectuals are devoted to managing the firms' performance. However, rare studies have analysed the combined effect of INC, CG and government intervention (hereafter GI) that can provide further explanation of SOEFP & SOENFP in Pakistan.

Based on the resource-based theory, this study analysed the relationship of INC (HC, customer capital (hereafter CC), structural capital (hereafter SC), IC) with SOEFP and SOENFP. The relationships of CG (ID, gender diversity (hereafter GD), management board size (hereafter MBS), independence of committee (hereafter IOC), management board meeting (hereafter MBM) audit committee meeting (hereafter ACM)) with the SOEFP and SOENFP is based upon the agency theory. Further, based on the “resource dependency

theory”, GI is used as moderator in this study that can change the strength of the relationships of INC, CG and the performance of SOEs.

Various studies have focused on the moderating role of government intervention in assessing the performance of organizations (Chen et al., 2011; Eniola & Entebang, 2015; Kusumawardhani et al., 2015; Kyal et al., 2021; Socrates & Gopalakrishna, 2020). The literature highlights the importance of government intervention in the performance of state-owned enterprises (SOEs). Given that SOEs are owned and managed by the government, the government's involvement in their operations, governance, and overall performance is significant (Joo et al., 2018). However, the degree and type of government intervention in SOEs vary greatly across sectors and countries.

Depending on the country and sector, the level of government intervention in SOEs can vary widely, ranging from direct involvement in daily operations to setting broad policy guidelines and monitoring their implementation. Regardless of the level of intervention, it can have a considerable influence on the performance of SOEs.

Government intervention can have a direct impact on various factors that influence the performance of SOEs. These include the resources allocated to them, the governance mechanisms put in place to monitor their operations, and the regulatory environment in which they operate. These factors can ultimately affect the financial and non-financial performance of SOEs as well as their ability to meet their social objectives.

According to research, the impact of government intervention on the performance of SOEs is not straightforward and depends on the context. On one hand, some studies have found that government intervention can positively affect the performance of SOEs. These studies include (Bhaumik & Selarka, 2012; Hryckiewicz, 2014; Tee et al., 2022). On the other hand, excessive government intervention can harm SOE performance by creating inefficiencies and reducing accountability. Research supporting this view includes (Bertrand & Betschinger, 2012; Li et al., 2022; Tan et al., 2021).

To sum up, the role of government intervention in state-owned enterprises (SOEs) is crucial and can have a significant impact on their performance. However, the extent and nature of government intervention vary depending on the country and sector, and the effect on SOE performance is complex and context-dependent. Policymakers should evaluate the pros and cons of government intervention in SOEs while considering the specific conditions of their country or sector.

The main goal of this research is to fill a gap in current knowledge by investigating how government intervention moderates the association between INC, CG, and the performance of SOEs. Although there are studies that have explored the impact of government intervention on the performance of SOEs, few have delved into how it interacts with other critical factors such as INC and CG. This study acknowledges the intricate and situation-specific nature of the connection between INC, CG, and SOE performance and aims to investigate how government intervention can moderate this relationship.

The present research aims to address a gap in the existing literature by examining how government intervention moderates the relationship between various factors (such as HC, CC, SC, IC, ID, MBS, MBM, GD, ACM, IOC) SOEFP and SOENFP. This study recognizes the complexity and context-dependent nature of the relationship between these factors and SOE performance, and seeks to fill this gap by analysing the moderating role of government intervention. Further Kamath (2019) stated that the board of governance sets the rules and regulations to align the employees, management and those actions who share and create values and appropriate allocation of resources for all employees. Resources include knowledge, assets, organizational processes, information, capabilities and firm attributes that are under the control of the organization (Alotaibi et al., 2019; Simanavičienė et al., 2019) and can yield sustainable competitive advantage that are rare, valuable, and inimitable (Barney, 1991; Carnes et al., 2018). INC, or sustainable advantages, refer to the ability of an organization to utilize its material, financial, and human resources to create value for stakeholders. As noted by the European Commission (2006), INC can be understood as a mechanism that enables organizations to leverage their resources in this way. Conger et al. (1998) highlight the importance of the board of governance as a team of knowledge workers who require the necessary resources and capabilities to perform their job effectively. Thus, INC and the board of governance must work together to enhance the financial and non-financial performance of organizations.

In other words, having stated earlier that this research has not identified any indication which studied the role of INC and CG with SOEFP & SOENFP by using the moderating effect of GI. Therefore, the main aim of current thesis is to analyse the role of INC and CG SOEFP &

SOENFP with moderating role of GI. Moreover, the research questions of the present research are given to further elucidate the research objectives.

1.3 Research Question

This research is addressing the subsequent research questions:

1. Does corporate governance (independent director, management board size, management board meeting, gender diversity, audit committee meetings and independence of committee) affect SOEs financial and non-financial performance in Pakistan?
2. Does intellectual capital (human capital, customer capital, structural capital, innovation capability) affect SOEs financial and non-financial performance in Pakistan?
3. Does government intervention moderate the relationship between corporate governance dimensions, intellectual capital dimensions and SOEs financial and non-financial performance in Pakistan?

1.4 Research Objective

Following research objectives are derived to address the answer the aforementioned research questions.

1. To analyse the relationship of corporate governance (independent director, management board size, management board meeting, gender diversity, audit committee meetings and independence of committee) with SOEs financial and non-financial performance in Pakistan

2. To determine the relationship of intellectual capital (human capital, customer capital, structural capital, innovation capability) with SOEs financial and non-financial performance in Pakistan
3. To analyse the moderating effect of government intervention on the relationships of corporate governance dimensions, intellectual capital dimensions and SOEs financial and non-financial performance in Pakistan.

1.5 Scope of Research

Previous research in developing countries was undertaken in economies just like Malaysia, Indonesia, India, Taiwan and Pakistan which are at a higher level of economic and has a high potential for development and possess strategic economic and geographical significance. While, Pakistan is facing different kinds of problems as compared to other emerging countries, such as the deficient balance of trade, indifference in the balance of payment and issues related to other macroeconomic indicators. Thus, it is crucial to understand how the CG mechanisms, selection of intellectual persons and interaction of GI will be the factors that enhance SOEs performance in such a capital market.

The motivation for choosing SOEs is that economy of Pakistan is also based on these state corporations. Firstly, these enterprises contribute significantly to the revenues and creation of the wealth of the government of Pakistan. Secondly, these SOEs are helpful in the reduction of unemployment because almost 450,000 jobs are aligned. Thirdly, this will create a balance among the market competitors and become the role model in the capital market in Pakistan.

This study will not give benefits to the capital market of Pakistan only but it will also try to provide important implications for the countries that are politically and culturally similar to Pakistan. This study will benefit the investors, academicians and practitioners. Through the implications and results of the study, the policymakers and regulators will analyse the current progression in the field of intellectuals, CG and the involvement of the government of Pakistan. In addition, they try to improve the standards and Code of CG with better practices and also reduce the coercion from political persons. The researchers will find directions and support for their studies through the results of this research. Furthermore, shareholders and investors will make their financial and investment decisions by considering the goodwill of intellectual personnel, the low level of intervention in decisions and the strength of CG in Pakistan. Last yet not least, findings of research provides guidance to all firms whose performance is very poor to compete and survive in this competitive world.

This research is beneficial for the top management of the SOEs by providing guidelines about the spending of the tax payer money for the welfare of the community. Performance reports are very useful in describing the outputs of the various departments of the firms. It helps in the budget allocation to the departments and policy makers make decision for the progress of the firms on the base of such reports. Especially, in the budget allocation process, performance of the firms enhances the quality of the spending pattern of the firms.

1.6 Significance of Research

This research is intended to resolve the issue related to SOEFP and non-performance through strong CG practised INC and GI in the perspective of Pakistan. Intellectual capital (INC) includes intangible assets such as human capital, structural capital, customer capital, and innovation capability. These resources are critical to the success of organizations, including SOEs, as they contribute to their competitiveness and ability to generate sustainable value over time. Human capital refers to the knowledge, skills, and expertise of an organization's employees, while structural capital encompasses the processes, systems, and technology used to manage knowledge and information. Customer capital refers to the relationships an organization has with its customers, including their loyalty, satisfaction, and willingness to refer the organization to others. Finally, INC refers to an organization's ability to create and implement new ideas and technologies to improve products, services, and processes.

Studies indicate that the effective management and utilization of intellectual capital, which comprises intangible assets such as HC, SC, CC, and IC, can lead to a positive impact on the financial performance of SOEs (Ali et al., 2021; Cabrilo et al., 2018; Chen et al., 2015; Jordão & Almeida, 2017; Subramaniam & Youndt, 2005). This can be attributed to the various benefits that efficient utilization of intellectual capital can provide, such as improved innovation capabilities, customer relationship, structural activities and increased customer loyalty, among others.

In conclusion, the importance of INC in SOEs cannot be overstated, as it can significantly impact the efficiency and effectiveness of these organizations. Effective management and

utilization of INC can enable SOEs to achieve their strategic goals and objectives, leading to sustainable economic growth.

Resource-based theory suggests that firms can gain a competitive advantage by possessing and effectively utilizing strategic resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). One such strategic resource is intellectual capital (INC), which is composed of various intangible assets, such as human capital, structural capital, customer capital, and innovation capability. Effective management and utilization of INC can help firms to create value and achieve sustainable competitive advantage, as it enables them to improve their innovation capabilities, enhance their brand reputation, and increase customer loyalty, among other benefits (Bontis, 1998).

Moreover, SOEs can benefit from INC by improving their innovation capabilities, strengthening their brand reputation, and increasing customer loyalty. Rachmawati, (2022) highlights that SOEs can utilize INC to innovate and offer new products and services that cater to the evolving market demands and customer needs. This approach can enable SOEs to sustain their growth trajectory and achieve long-term profitability. Therefore, proper management and utilization of INC can provide SOEs with a competitive advantage and contribute to their long-term success.

That is a succinct and accurate summary of the importance of INC in the context of SOEs. Proper management and utilization of INC can help SOEs gain a competitive advantage, adapt to changes in the external environment, and ultimately contribute to sustainable economic growth.

In SOEs, corporate governance is crucial to ensuring that the interests of the government as the owner, and the public as stakeholders, are safeguarded. Effective corporate governance mechanisms can promote transparency, accountability, and ethical behavior, which can contribute to improving the overall performance and reputation of SOEs. Additionally, good corporate governance practices can help to mitigate the risks of agency problems and conflicts of interest that may arise between the government, SOE executives, and other stakeholders.

Corporate governance is vital in SOEs, which are typically owned by the government and are subject to unique challenges related to accountability, transparency, and performance. According to agency theory, the relationship between shareholders (in this case, the government) and management is characterized by a principal-agent problem. The agents may have different goals and incentives than the principal, resulting in a risk of agency costs arising from conflicts of interest and information asymmetries (Jensen & Meckling, 1976).

Corporate governance mechanisms, including board structures, executive compensation, and performance evaluation, can be effective in aligning the interests of agents with those of the principal and reducing agency costs (Fama & Jensen, 1983). In SOEs, good corporate governance practices can improve transparency, accountability, and performance, while reducing the risk of corruption and other forms of misconduct that can result from weak governance structures (Guthrie et al., 2012).

In summary, corporate governance plays a crucial role in state-owned enterprises (SOEs) by addressing the principal-agent problem and reducing agency costs, which can ultimately lead to improved performance, accountability, and transparency.

Resource dependency theory argues that organizations are dependent on external resources to function efficiently, and these resources can be obtained from the environment or other organizations. For SOEs, government intervention is often crucial in providing essential resources such as capital, expertise, and regulatory support. This can be especially critical in industries where the government has a significant role or where private firms face significant barriers to entry.

Government intervention can be a valuable resource for SOEs, as it can provide them with the necessary support to function more efficiently and effectively. This can include financial assistance to help SOEs invest in new technologies or infrastructure, as well as regulatory protection that shields them from competition. Moreover, government support can lend credibility and legitimacy to SOEs, which can be critical in attracting customers and investors. In industries where the government has a strong presence or where there are significant barriers to entry for private firms, government intervention can be particularly important in providing essential resources for the operation of SOEs.

Resource dependency theory highlights the risk of organizations becoming overly dependent on external resources, which also applies to state-owned enterprises (SOEs) and their relationship with government intervention. While government support can provide critical resources to SOEs, excessive dependence can create inefficiencies and hinder innovation.

Overreliance on government support can lead to complacency, reducing incentives for SOEs to operate efficiently and innovate. Furthermore, political interference and corruption can arise when the government has too much control over SOEs, undermining their legitimacy and performance.

To strike a balance between the benefits of government intervention and the risks of overdependence and political interference, effective corporate governance mechanisms are crucial. These mechanisms can provide independent oversight and accountability for SOEs, mitigating the risks associated with excessive government intervention. By ensuring that SOEs operate transparently and efficiently, corporate governance can help maintain the trust and confidence of stakeholders, including the government, investors, and the public. Ultimately, good corporate governance practices can promote better performance and reduce the risks associated with SOEs, while enhancing their contribution to the economy and society.

1.7 Organization of the Study

The 1st chapter of the study provides an overview of study's background, problem statement of the study, research questions, research objectives of this particular research, significance, and scope of the research. The background section provides context and justification for the study, explaining why the research is necessary and relevant. The problem statement, research questions and objectives, and significance and scope of the study are all key components of the research design, which outlines the research methodology and guides the entire research process. Each of these components serves a unique purpose in defining and addressing the research problem, identifying the research objectives, and explaining the

potential impact of the study. A literature part gives an overview of the INC, CG, GI and SOEs performance. This chapter also compared the CG mechanisms and practices in different developed and developing countries with Pakistan. Chapter 02 of the thesis focuses on the theories explaining the direct relationships of IC, and CG on SOEFP & SOENFP and analyse the moderating effect of GI on the aforementioned relationships. This chapter examines the relationships between the independent variables and the dependent variable, as well as the moderating effect of the moderating variables on these relationships. It aims to explore how the predictors impact the predicted variable, and how external factors may influence these relationships.

Chapter 03 in this research focuses on the research methodology. In this chapter research philosophy, research design, selection of the population, sampling technique and the measures of the variables have been explained. The research design comprises the selection of the sample, the data collection technique, data analysis, and the methods used to measure the variables. In Chapter 04, the study's results are presented, which encompass a descriptive analysis of the data, testing of the data, the outcomes of regression analysis, and the results of hypothesis testing. The main goal of this chapter is to examine the influence of the predictors on the predicted variable and to explore how the moderating variables can impact the relationships between the independent and dependent variables. Chapter 05 presents the discussion of the thesis. In this chapter, the results of chapter 04 are analyzed and discussed in relation to the existing literature, providing insights into the research questions and objectives. In addition to presenting the main findings, the chapter also addresses the limitations of the study. Recommendations for future research are provided to overcome these

limitations. The chapter concludes by summarizing the main findings and their implications for practice and future research.

1.8 Summary

This chapter addresses the importance of INC and CG to enhance the performance of a corporation. Meanwhile, this chapter also discusses how GI could strengthen these relationships as a moderator. The chapter highlights several issues associated with CG practices and INC in Pakistan. CG is further divided into board size, board meeting, GD, ACM, ID and IOC. While INC is also segregated into HC, SC, CC and IC. Furthermore, the chapter defines the research gap and describes why this study is significant, especially Pakistani context. The importance of the study has been divided into theoretical as well as practical significance. The study will contribute to and support various intellectual and CG theories. Additionally, the study could help the Securities and Exchange Commission of Pakistan in reforming CG, IC and GI practices in Pakistan. . The tested and revised “new” concept of IC, CG and GI regarding the performance of SOEs in Pakistan, along with the recommendation and implementations is the final outcome of this thesis. Lastly, the scope of the study is bigger than previous researches conducted in the context of Pakistan in term of an extensive period of study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The current part of this study comprises on a literature review, on the subject matter, namely: CG, INC, GI, and performance of SOEs in Pakistan. Following are the units that contained within the chapter: the main points of SOEs effectiveness, an over-view of state intervention, an over-view of INC, an overview of CG, CG and SOEs performance, INC and SOEs performance, INC, CG, GI and SOEs evaluation, and the underlying theories, summary of review of the literature and Chapter Overview.

2.2 Overview of SOEs Performance

Prior research has investigated that company performance from various perspectives, for instance FP, organizational performance, or performance of the commercial entity (Al-kalouti et al., 2020; Kaloti & Fouad, 2022; Lucia-Palacios et al., 2014; Wang et al., 2014). In the direction of assess performance, one must understand firm performance along with financial performance and non-financial performance. Financial output suggests a calculation of how efficiently a company uses assets to generate revenue from its primary mode of operation. The NFP is a long-term goal which underlines the significance of enhancing the customer loyalty, fascinating the new shoppers and improving a firm's identity and reputation. Performance can be estimated in numerous viewpoints, such as argued by (Afram et al., 2022; Kariuki & Kiambati, 2017; Kyriakopoulos et al., 2004), For instance; metrics used to measure the Accounting performance, e.g. return on investment (Newton, 2015; Newton et al., 2014) or solvency, are actually problematic to estimate. In practice with business administration “Assessing the firm’s achievement in the business

management area is a multidimensional paradigm comprising the firm's growth relative, market share, and profit margin to the key competitors of the market"

Firm performance apprehend the organizational efficiency in relations of financial & operational efficiency (Busch & Friede, 2018; Saraf et al., 2007; Venkatraman & Ramanujam, 1986). Earlier studies have taken advantage of many metrics to assess firm results. Such measures, however, are divided among three groups, i.e. general groups: economy & productivity and some in others groups. Along the lines of this conversation, financial indicators contains, for example, frequently used measures; return on investment (Newton, 2015). This is debated by (Hariyati et al., 2019; Mahmood & Mann, 1993; Rai et al., 1997; Surty et al., 2018), return on sales (ROS) (Bharadwaj, 2000; Dubey et al., 2019; Kristoffersen et al., 2021), return on equity (Alpar & Kim, 1990; Newton, 2015; Newton et al.; Rai et al., 1997; Yang et al., 2020) sale (Chou et al., 2021; Mahmood & Mann, 1993; Rai et al., 1997; Zhuang & Lederer, 2006) and revenue (Devaraj & Kohli, 2000; Prajogo et al., 2018; Rai et al., 2006).

Normally these provided indicators illustrate firms' ability to profit. Many researchers used indicators related to efficiency to investigate, the impact of this on operational efficiency, for example productivity (Brown et al., 1995; Grover et al., 1998; Hitt & Brynjolfsson, 1996; Mukhopadhyay et al., 1997), In addition , the cost of the reduction covers the costs of manufacturing / selling products (COG/ S), such as marketing and general administration operating expenditures (SGA / S) etc. (Bharadwaj, 2000).

Moreover, nonfinancial perspective consists of the perspective of customer satisfaction, in-house business practices prospect, knowledge and development viewpoint. Other studies

have found that using unique measures (consumer statistics, business entities, end user satisfaction, load factors, total market share along with the availability of tons of miles) in the consumer perspective influences FP (Amhalhal et al., 2021; Banker et al., 1998; Behn & Riley Jr, 1999; Omran et al., 2021)

Customers are one of the NFP, this performance shows how the perspective of customers views the company (Joshi et al., 2022; Kaplan & Norton, 2005; Omran et al., 2021; Schiavone et al., 2022). Many companies have difficulties in making customer measurements. The measurements that are widely used today during the measurement session are: satisfaction of the customer, total share of the business from the industry, profitability or life time value from the customer, and retention. All of above mentioned elements having importance in firm overall performance and very valuable when performance indicators are known (Dobrovic et al., 2018; Nappi & Kelly, 2022; Niven, 2002).

These procedures emphasis the non-financial characteristics of the organization, but may be combined with operating data of accounting and additional fiscal data. A feature that leads the organization to follow these processes stems from the fact that extraordinary performance of non-financial features will leads to a good FP in near future (Banker et al., 1998; Kaplan & Norton, 2005; Omran et al., 2021), so the status of tracing such performance facets are crucial.

An extreme attention to measure performance through non-financial aspects possibly will effect in some adverse significances which can in turn conciliation the performance measurement aims. There are two consequences of such acts, first, such transactions tend

to create some prevalent incentives with focus on shifts to achieve isolated targets but through this, the strategic intentions may be compromised (Hawkins & Hastie, 1990). On Second, it is very difficult to measure the objectivity of the firm in a given frame of time with efficiency. (Chow & Van Der Stede, 2006). Apart from this, SOEs performance which is based on non-financial appeals yields the trade-offs that constantly and frequently occur between financial base results and non-financial base outcomes (the commercial mandate) and non-financial (the social mandate) performance results (Ahmed & Manab, 2016; Dobrovic et al., 2018; Omran et al., 2021).

There are three broader categories of NFP measures: these are (i) production volumes, machine productivity and labour productivity, known as internal measures (ii) Employee development, employee turnover and employee satisfaction, known as employee oriented measures (iii) customer satisfaction, customer retention and market share, known as customer orientated measures. All above three measures are directly relevant to utility companies in general while most of them are SOEs are for Sub-Saharan Africa particularly. Market measures various calculation methods to measure the corporate performance which are financial metrics, relative market growth and market share. All these methods are utilized margin scales of profit as well as market margins. Customer satisfaction is the other measure used in certain situations with other indicators (Devaraj & Kohli, 2000), Value addition is the other important indicator (Liang et al., 2010; Pradhan et al., 2015) while market share is the least but not the last important factor (Baker & Sinkula, 2005; Dijkstra, 2020; Maroufkhani et al., 2019).

Apart from all above important factors, it is not practically probable to measure the entire variables in present study as this study is empirical and created on the basis of primary research. The main limitation is the data availability issues and access to data in SOEs

industry. In addition, all required information as per suggested framework cannot be linked with some indicators whose data is not available, so the present study has included only that indicators which are directly related to financial & SOENFP of the SOEs.

2.3 Overview of Intellectual capital

In the meanwhile, the INC has gained the attraction of researchers and practitioners which is directly associated with rapid growth of economies. In fact, INC is considered a critical and important factor to ensure the firm's success and has gained much more importance as compared to other tangible and traditional resources (Edvinsson & Malone, 1997; Wang et al., 2016).

However, in previous studies INC remained unclear in relation with organizational performance. Some scholars found that IC and its factors are directly responsible for firms performance for both financial & SOENFP (Ling, 2012; Sardo et al., 2018). The possible of this divergence in the literature is its conceptualization with varying techniques by different researchers. Some of the researcher have developed a single construct for INC like (Bontis, 2001a; Edvinsson & Malone, 1997), contrary, other identifying factors for financial & SOENFP are relational capital, SC and HC which can be termed as sub constructs or dimensions of the measuring concept (Menor et al., 2007; Wang, Cai, et al., 2021; Yang, 2018).

In addition, some of the previous studies assumed that a lot of other components of INC also has similar impact on the performance of a firm (Rehman et al., 2021; Sharabati et al., 2010a; Weqar & Haque, 2022). Furthermore, these varying components of INC may have diverse impact on the performance of the firm. (Naseer et al., 2021; Wang et al., 2016;

Wang et al., 2014). Also many researchers have confidence in that INC is the main competitive advantage of any organizational outcome (Cheng et al., 2010; Khan, Yang, et al., 2019; Wright et al., 1994), so it would be more meaningful if we investigate the varying components of INC to measure the specific effects of firm's performance. For this very purpose, previous studies also developed different INC frameworks to measure the performance at firm level.

In another study, Spender (1996) classifies knowledge in to two dimensions known as explicit and social criteria. Spender used these dimensions to build a matrix with four various elements of INC to measure the performance of the organization. Similarly, Edvinsson and Malone (1997) concluded that the IC is mainly comprised of two dimensions, SC and HC.

Bontis (1998) categorized the INC into three components named as structural, customer and HC. Based on this and previous studies, it has been concluded that in fact INC has four main components which are innovation capability, relational capital, SC and humans capital (Aljuboori et al., 2022; Chen, 2008; Herremans et al., 2011; Hsu & Wang, 2012; Limijaya et al., 2021; Wang, Cai, et al., 2021). INC is comprised of the following dimensions.

2.3.1 Human Capital

HC (Chen et al.) consists of the expertise and knowledge acquired by workers and when they leave the company, this knowledge goes with them (Čater & Čater, 2009; Khan, Yang, et al., 2019). In the sense of the RBV, (Chung et al., 2019; Gellweiler, 2018; Wright et al., 1994) argued, competitive edge a business can achieve with the help of the pool of HC,

additionally, today corporations are analysing their existing means and resources to choose an effective approach. In the view of numerous researchers (Bontis, 2001b; Kengatharan, 2019; Khan, Arafat, et al., 2019; Subramaniam & Youndt, 2005; Torres et al., 2018), HC is the company's main resource in an age where employee skills and knowledge are indispensable to maintaining the competitive advantage. Moreover, theory of HC describes the value of this as a main element of the profitability of an organization and considers the ownership of skills and expertise required for the workers to meet the essentials of their employment. The HC is relevant in businesses like financial institutions and the necessary pharmaceutical industries wherever companies try to gain competitive edge in technology, modernization and improvement. Therefore, modern organizations' required such type of human resource who own the skills to innovate and solve problems.

Hsu and Wang (2012) The main focus of the modern originations to continuously increase the competency of their workers through enhancing their expertise and knowledge and HC have the main concern with these expertise and knowledge because of value addition in business. Many reasons that HC consider in organizational efficiency, for instance, HC skills improve the ability of required decision making of the organization. In this way, an organization can better fulfil consumer expectations if workers have these creative skills (Kotabe et al., 2016; Subramaniam & Youndt, 2005).

2.3.2 Customer Capital

In the literature, CC (the term “relational capital” is generally used) is characterized as the stakeholders and company relationships. This includes mainly the customers, shareholders, suppliers, partners, creditors, distributors, etc (Amin et al., 2018; do Rosário Cabrita & Vaz, 2005; Hormiga et al., 2011; Khan, Arafat, et al., 2019; Roos et al., 1997). CC is considered

to be an aspect of INC that enhances the company's external links; with advertising agencies, sales department, and overall marketing activities are most important ways of capital building. The CC, known as the number of acts within societies apprehensive with resource distribution with the help of social structures (Bontis, 2001b; Hsu & Wang, 2012). In other words, by communicating with individuals and other firms CC can be represented as the sum of the implied resources generated and enforced by the firm.

Companies with a good CC will create further partnerships, thereby through their interdependencies. Social interactions that are consequential from inter-dependencies upsurge trust. Sometime, this may explicitly substitute the contract (Dyer & Singh, 1998; Rosenbusch et al., 2019; Schommer et al., 2019). Employees learn new values and skills through these exchanges, which will contribute to the company's wealth creation directly.

2.3.3 Structural Capital

In past studies, SC was not adequately defined in which it had different tags but meanings are same between different concepts of INC. Based on previous literature, SC can be process capital (Bontis, 1998, 2001b; Bontis et al., 2018; Bontis et al., 2002) and organizational capital also interlinked with ability (McDowell et al., 2018; Salazar-Elena et al., 2018; Van Buren, 1999). Bontis et al. (2002) described SC as the information embedded in an organization's schedules which includes technical modules and architectural competencies. The knowledge infrastructure in (Gold et al., 2001; Iqbal et al., 2018) generally constitutes variables such as organizational structure, culture, and technology in common.

Viewed differently, SC basically is the hardware, database, software, patents, and organizational structure. This also includes everything else that human resources is used to facilitate their business processes and activities, as discussed by (Bontis, 2001b). However, the extract of structural resources puts greater focus on "the information contained in an organization's routines" (Bontis et al., 2002; Hudspeth et al., 2022). The cultural and technical dimension, combined with systemic capital, involves more in knowledge base infrastructure (Hsu, 2006; Iqbal et al., 2018).

SC incorporates technical and technological factors (Bontis, 2001b). Moreover, Bontis (2001b) and (Dzenopoljac, 2022) argues that it is possible to locate the relation within the social network between structural and HC. Social features interconnect everybody in an organization. One outlet as defined by Bontis (2001a) is the social characteristic. Such media possess implicit awareness of their social networks. In terms of definition, SC is the most difficult among various components of INC, as it is related to other capital. SC's main focus is on embracing a sound foundation, with views on process capital, organizational capital, even knowledge management and the innovation capital according to (Hsu, 2006).

2.3.4 Innovation Capability

Scholars have given various descriptions of inventions to demonstrate what innovativeness they understand (Lopez-Vega & Lakemond, 2022). Joseph Schumpeter was first to discover the vital role creativity plays in the countries' economic development. He addressed that following trends of innovation occurs, the launching of new product or services and the putting into practice of a new engineering practises, the new market opening, and raw material or semi manufactured products supply's new source takeover and the finding of a new business in any industry (Schumpeter, 1934). The innovation was

described as the implementation of an idea or action that is new to the company and may relate to a process, software system, policy or program for the product service (Opland et al., 2022).

The introduction of processes and products helps the organization to advance the order of procedures that help out its adaptation to dynamic environment changes (Withers et al., 2011). Innovation will allow organizations in their environments to respond to certain changes which come up with two alternatives: evolve or die. In that clause Fan et al. (2021) suggested, “the effective introduction of new products is the support of most companies”. Innovation has become a standard and widely recognized as a key to competitive advantage. By creating superior value for customers through innovation, firms can achieve competitive success (Gërguri-Rashiti et al., 2017; McDowell et al., 2018; Rosenbusch et al., 2019; Salazar-Elena et al., 2018; Schumpeter, 1934; Wu et al., 2016). If organizations effort continually, develop the new product or service to fulfil the customer requirement only then they would be able to achieve lasting success.

Table 2.1

Studies linking Intellectual capital with performance

Authors	Nature of Study/Methodology	Findings
Budiarso (2019)	Empirical Study	human capital and structural capital have no insignificant influences to firms performance
Hermanto et al. (2021)	Data were collected from 16 SOEs listed on the Indonesia Stock Exchange	The results indicated that Corporate governance and positive effects on a firm while INC effect positively to FP.
Xu and Li (2020)	Empirical Study	Intellectual capital enhances firm performance in China

Zhang et al. (2021)	Empirical Study	Human Capital has an influence on the financial performance of the firm
Rachmawati et al. (2022)	Data were collected from 10 SOEs	Intellectual capital has poor financial performance
SUHARMAN et al. (2022)	Data were collected from 60 State-Owned Enterprises	intellectual capital has a positive and large impact on firm performance
Reynaldi and Wijaya (2022)	Empirical Study	The finding revealed that structural capital, human capital, and customer capital have an influence on the Indonesia banks
Ermaya and Mashuri (2021)	Empirical Study	The findings of this study revealed that intellectual capital have a substantial influence on financial performance, whereas the independent commissioner has a large negative effect on financial performance and the audit committee has no effect on financial performance.

2.4 Overview of Corporate Governance

CG has also come to be a significant subject for the person who have focus on new business especially in the countries that have emerging economies (Min et al., 2022). Executives, board members and shareholders have the knowledge about the importance of the CG and board knows that good corporate governance practices have positive benefits. They know good CG will help companies enhance performance and at the same time it will increase the share price and promote new capital for the company (Al-Tally, 2014; Njuguna, 2018; Omran et al., 2021). The stockholders will be reluctant to purchase stocks and spend their capitals in firms that do not pursue good CG principles. Investors should typically be paying attention to the question of accountability, the involvement of BOD and ACM within an

enterprise's governance structure. Local and foreign investors will not prefer to capitalise in firms which do not strictly pursue the principle of good governance practices.

The governance involves in cooperation of several interested party in the business. These stakeholders may be shareholders, creditors, management, trade unions, government, staff, investors, consumers and suppliers. A corporate culture consists of a set of special relationships of individuals who share the same physical and legal interest in an enterprise business. A good corporate practices must promote industrial, innovative activity and governance systems. This action can be done by taking into account the conflict that is innate and inherent within the company in the form of multiple interests. (Brezeanu & Stănculescu, 2008; Matis et al., 2016; Min et al., 2022; Njuguna, 2018).

The CG literature identified three primary models. The reference includes (Brezeanu & Stănculescu, 2008) and researchers explained these three models are the stakeholder model, co-determination model, and traditional model. The traditional model practices a hierarchical organization of three levels and at the top level included stakeholders, at middle level represent the directors who made policies and implement those policies with the help of bottom level known as managers. The said model is extensively used in the countries of North America. The model of co-determination is commonly used in countries of Western Europe. In Western Europe the company classified their hierarchy into four different levels that known as owner (shareholders), employees, directors who manage the policies with the fourth level managers. The stakeholder model is commonly cast-off Southeast Asia. These countries also follow the four levels of hierarchy. The main alteration with in the model of co determination lies in the nature of the generated relationships. While not specifying the extent of rights and responsibilities, however the burden of responsibilities

for each investor is allocated by the last model. The functioning of existing scheme maintains a sense of balance concerning the levels of decision making (Brezeanu & Stănculescu, 2008; López-Arceiz et al., 2018).

In their analysis Crowther and Seifi (2016) showed that CG is integral for any firm's sustained activity. Therefore, the execution of the governance procedures should be given considerable attention. In same way the sustainability of firm's procedures is considered the foundation for each firm. The meaning and concept of CG is generally clear but there is still no clear meaning of sustainability. However, according to Crowther and Seifi (2016), two fundamental concepts should have a relation between the two. The relationship research was analysed at FTSE includes 100 companies and their governance strategies. The research initiated that study has many reasons and strengths in favour of optimism. However some weaknesses have also been discovered.

Mardjono (2005) studied the failure of well-known Australian company and many global companies in his research. He explained the collapse in relation to differences between applying in best practices. He demonstrated the importance of relationship and implementation between business continuity and CG (Crowther & Seifi, 2016; Gomez & Crowther, 2022). By studying the existing published theories between 1998 and 2004 and the outcomes of earlier academics on governance and business steadiness, we gained empirical evidence from companies like Enron Inc, and Heath Insurance International Holdings (Bentler & Chou) and what happened to them. For that reason a matrix and environment was built to gain the main CG perspective. We used this perspective to get research proposals. The study found that the concept of good CG was accepted by Enron and HIH seeing that structure in action. But later the company failed to apply those concepts

in practice. Each of the principles was infringed, and this became main reason and attribute in the failures of both companies.

NJUGUNA (2014) arguing that weak CG is the reason why SOEs worldwide productivity is weak. In many states, SOEs efforts are normally less effective in ensuring continuous improvement in the company's efficiency. The reason is, that the government official has not completely resolved the scarcity of key governance standards in public companies. This is due to the dual objective, the competing aims, undue political involvement and obscurity. In his research on SOEs in multiple jurisdictions, Wong (2004) discussed how an integrated strategy, including perfect path, political independence, and openness, can strengthen SOEs governance and pave the means to the next stage of competency and efficiency.

2.4.1 Independent Directors

The elected members of the company known as directors that are voted by the shareholders. The directors of the firm are responsible to look after the operations. These directors played a vital role to mitigate the agency issues and this role consider the core of governance of every company (Fama & Jensen, 1983). Prior studies exposed that sufficient number of directors that are independent played a vital role in the betterment of organization as well all look after the tasks that are beneficial in the growth of organization (Jensen, 1993).

The government enterprises in China, according to Peng (2004) established that independent members of the board create distinguish in the company's results. Success was measured by ROE and growth in sales in this study. Both indicators show an impact, even if the increase in monetary results is in the low range. Furthermore these outcomes recognised the effects of having an outsider appointed to take a seat as a member of BOD.

The purpose is to put the continuous pressure so that to incorporate many theories beyond the agency theory of (Jensen & Meckling, 1976). The main objective of the governance study to obtain a result that is consistent with the political inferences of in the developments of agency theory. In developing countries, this lead to the exercise of ID in CG.

From period of 2000 to 2005, a research accompanied by (Setia-Atmaja, 2009) gathering statistics from the public corporations of Australia. This study established the existence of ID with FP of the company positively. Moreover, the analysis has also found that rights attentiveness having negative impact in the business where BOD were independent.

Lefort and Urzúa (2008) several specifications of the equations and econometric models were used to study corporate performance and board composition. They noticed that independent BOD had the influence on the performance of firm. Another analysis were take place regarding the proportionate of professional and shares of ID. This shows that outcome of their presence is found in the company's value only. Furthermore, for businesses that has the capability to aggravate the problem, as calculated by a little probability on businesses. Such businesses, having the rights of voting and cash flow account, s control under the supervision of shareholder, they prefer to sign-up a qualified directors to the board. Because this is an attempt to enhance the agency issue and strengthen the CG. It also happens that those companies who provide the financial needs are more likely to have professionals as senior executives.

2.4.2 Management Board Size

The governing panel of the BOD whose members are particularly specified in company's article of association (AOA), internal legislation or board of commissioner's resolutions.

In addition, financial institutions, bond issuing firms, and stock market listed companies must elevate a minimum of two directors according to IFC, 2014.

Dalton et al. (1999) established a study of 20,620 firms by using a meta-analysis from 131 studies. The studies initiated a systematic association amid board size and success of the firm. The investigation has shown that in smaller companies the association amid the board size and the efficiency of the firm was greater. Furthermore, Dalton et al. (1999) demonstrated that to measure the performance there is two types and both types showed consistency between the results. The types include both the market and accounting based measures to know the business performance.

In contrast through Cheng (2008) acquired diverse results regarding MBS relationship and the company's performance. He found the board's size had a negative relation to ROA (company performance). Such findings are consistent which tells us that to build a consensus on any decision large board size need extra flexibility. And that consensus was less dramatic than the decisions taken by smaller MBS. Large MBS will have a lesser amount of diverse results.

Belkhir (2009) similarly determined that a small MBS would be additionally operational than a big MBS. Nevertheless, this does not affect the company's efficiency by rising the number of directors at businesses such as banks. Thus, several proofs (although opposing) have been uncovered suggesting that board size and corporate output having positive relationship.

2.4.3 Management Board Meetings

An imperative basic for the board of directors (BOD) is to implement CG and look after shareholders. This is also their duty to protect corporate interests by growing and accumulating the standards of governance. Regular board meetings are essential for the efficient functioning and performance of the BOD. These meetings provide an important platform for resolving issues and making informed decisions related to the company. The presence of directors at these meetings is crucial as they bring their expertise and knowledge to the table, enabling the board to make well-informed decisions. Additionally, the meetings facilitate the exchange of specific information among the directors, enabling them to observe the role of the BOD in different companies.

As suggested by Vafeas (1999) the meeting of BOD relates to the governance of firms. This is reliable with the principle of contracts and agencies. In his study Belkhir (2009) also found that there is an inverse relation amid the number of MBM and the worth of the firm. These finding were determined that the prices of stocks decrease as the activity of board increases.

Furthermore, it was found that the board's abnormal activities were because of the enhance the operational performance in subsequent years. This improvement is most prominent for underperforming firms and those firms that don't engage in control of corporate transactions.

Frequently meetings considered a theoretical proposals for calculating BOD strength, work quality as well as tracking effectiveness. Higher frequencies of board meetings will result in good quality control monitoring and ultimately have a optimistic influence on the

outcomes of financial firms (Gallardo-Vázquez et al., 2019; Musleh Alsartawi, 2019; Vafeas, 1999). Additionally, (Ji et al., 2019; Musleh Alsartawi, 2019; Ntim & Osei, 2011) also have the same opinion with other researchers that the relationship between performance of companies and occurrence of MBM, exist there. The As the directors that attend the meetings more often and regularly appears to deliver the financial results of better firms.

2.4.4 Gender Diversity

GD can be considered as a method of utilizing diversified skills and attributes in a woman or a man who could give the organization advantages. Some researchers also define the GD as the existence of women as directors in the boardroom (Dutta & Bose, 2006). Women's presence at the board brings with it diverse roles that could eventually affect firm results. Male managers can lack certain skills that can be protected on the board by the independent women managers. They could ask some questions that male directors might hesitate to ask (Carter et al., 2010). However, due to different opinions, some conflicts may arise with GD and it could also lead to negative effect firm's performance. As (Nekhili & Gatfaoui, 2013) argued that value of some companies is generated by women on board but the value of others is decreased. Therefore, the on-board implications of gender equality are not apparent.

While researchers provide awareness about the connection between the GD and businesses outcomes, the results distinct in these studies. Moreover, Carter et al. (2010) assessed that the GD have positive impact on both business performance and internal audit feature. Similarly, Erhardt et al. (2003) have also found that investment return also have a positive influenced by GD (Newton, 2015) and asset return (ROA). Soares et al. (2009), Studied

Fortune 500 firms, stated that the inclusion of the female as directors on the board will enhance the return on invested capital by 66 percent, revenue return by 42 percent and equity return by 53 percent. Adams and Ferreira (2009) analysed the univariate test and recognized a positive link between GD and ROA. Levi et al. (2015) assessed that in certain contexts, women may have some experience such as marketing that is more important. Wang and Clift (2009), anyhow, there is no any significant correlation between GD and firm success. The researchers concluded that lack of representation of female director on the board is unable to impact the efficiency of the company. Thus, Abdullah and Ku Ismail (2017) found negative effects of GD on ROA and Tobin's Q in 100 Malaysian companies that are not financially involved.

Due to cultural practices in different countries, the findings of current academic literature varied as well. For example, Malaysian companies were taken into account by Julizaerna and Sori (2012) over the period 2008-2009. They posited a positive correlation linking with business outcomes and GD by using the method of ordinary least square regression (Slater et al., 2010).

Christiansen et al. (2016) examined women's relationships in senior roles and business efficiency at 2 million European firms. Women on board contribute positively to knowledge-intensive, high-tech, and service sectors where strategic thinking and high skills are required. However, Low et al. (2015) are quite different. They studied the Singapore, Malaysia, South Korea, and Hong Kong companies and found a strong relationship of female directors and company success (Newton, 2015). Nonetheless, in economies with higher women empowerment and lower economic participation, the positive impact tends to be mitigated due to tokenism. For countries with strong cultural resistance, obligatory

quotes for gender and requiring the appointment of women director will reduce firm efficiency.

For the year 2007, the Marinova et al. (2016) analysis selected 186 Denmark and Netherlands firms. They concluded that because of a low depiction and representation of women in the board committee, there is no relationship between the performance of firm and GD. Sanan (2016) obtained a list of 148 Indian companies under investigation from 2009 through 2013. There is a positive relationship between on board independent women and business success (Tobin's Q and ROA) using the estimation of fixed effects and the OLS model. Nevertheless, the author found opposite results when analysing the data with the estimation of the Arellano Bond. Abdullah et al. (2012) analysed 841 publicly listed companies in Malaysia, revealing that women on board have the positive influence on financial accounting based output performance but having the negative effect on market based performance.

Government in Pakistan claimed gender equality. But researchers found that representation of women is very less in top management positions. Yasser (2012) assessed that women are neglected in executive positions, and that most companies do not promote the position of female CEO. Glass ceiling should be removed in Pakistan so that women can play their roles effectively in improving firm efficiency. There are only a couple of research work on the connection between GD and firm success and even mixed findings from these research Yasser (2012) for example, found no substantial relationship between firm results and GD. Similar findings were claimed by Al-Mamun et al. (2013) and Zahoor (2016) analysed 50 KSE listed companies based on highest market capitalization and found positive connection and relation between GD and firm's profitability. Mirza et al. (2012),

conversely, alleged the negative relationship between on-board women and enterprise results. Because of these inconclusive results, further study is needed to more coherently explore this empirical association.

2.4.5 Independence of committee

It was under the umbrella of autonomous committees that several select committees carried out their operations. These committees are ID chaired audit and nomination committee, risk management and remuneration committees (ACT 2017). Such committees are usually set up to assist the company's BOG in efficiently performing its fiduciary responsibilities, either as investor protector or as BOD supervisor and counsellor. The literature has underscored the IOC significant role in enhancing and sustaining the CG. The one of board's important committees is IOC, because the committee's task is to help out the BOD in preparation of financial statements. The supervising of accounting is also important task, because in it can decrease the information irregularity between internal and external parties (Klein, 1998). According to of the public companies in Australia, Atmaja (2009) concluded the research on the available data of public firms in Australia, that the IOC must be independent because independency is fundamental and very essential to the achievement of any firm. The researcher established that the positive relation between IOC and firms'.

As stated in the above section, the independency of the IOC affects the increase in the efficiency of company. The independence level of Board members' and their experience is correlated with the quality of the company. This is due to the fact that IOC has a huge role in supervising and monitoring the company's financial worth reporting process, overseeing the control of internal accounting matters and audit process with reviewing practices of risk

management. And this can increase the ability of board to perform its duties in turn (Aldamen et al., 2012).

2.4.6 Audit committee meeting

Most of the previous studies considered ACM while studying the effectiveness of this as it shows the activity and diligence of the members of the committee (Abbott et al., 2000; Hsu & Petchsakulwong, 2010; Kyereboah-Coleman, 2007; McMullen & Raghunandan, 1996). Frequent ACM may improve the company's financial processes which ultimately boost FP (Abbott et al., 2000). The advocates of theory of resource dependence and theory of agencies are both in favour of frequent meetings in the audit committee. According to Pearce and Zahra (1992), regular meetings and inspections of ACM are beneficial for the operations of the organization because they can recognize and address the problems in a timely way.

Most theorists and CG regulators believe that an effective ACM will reduce disputes between agencies and conduct tasks of financial reporting effectively (Sharma et al., 2009; Shleifer & Vishny, 1997). According to Lee et al. (2004), members of the ACM have to show vigilance by putting their time and energy into duties and tasks. Frequent meetings show ACM activity that can influence management and board decisions (Abbott et al., 2004). It is generally believed that when ACM depicts a lower level of activity, they cannot perform tasks or responsibilities effectively (Archambeault & DeZoort, 2001). Consequently, earlier research suggested that businesses schedule at least three ACM to improve CG and ensure better monitoring (Abbott et al., 2007).

Anderson et al. (2004) stated the correlation between regular ACM and debt costs is negative. In the same notion, Abbott et al. (2003) by employing 78 firms tested a link between ACM and earnings management. They alleged that activities or meetings of ACM had a negative relation with corporate fraud and restatements in financial reporting. Likewise, Yatim et al. (2006) found that ACM with financial reporting problems also had a negative effect. Xie et al. (2003) analyse the adverse impact on earnings control of ACM diligence. While on the other hand, Lin et al. (2006) analysed 106 publicly listed companies but did not find any significant relationship with earning restatements or fraudulent activities from ACM.

The most important objective of the ACM is the supervision of the company's risk management practices, audit evidence, internal accounting control and financial reports (Al-Mamun et al., 2013). Thus, a broad range of academic literature is available that argued that meetings of ACM could lead to superior performance in the firm (Jackling & Johl, 2009; Kyereboah-Coleman, 2007). Several prior studies found that ACM and performance of firm have positive relationship, in connection with a perspective of dependence on resources and agency.

Table 2.2

Studies linking corporate governance with performance

Authors	Nature of Study/Methodology	Findings
Heo (2018)	Data were collected from 320 SOEs in the Republic of Korea	The results indicated that the board size has a significant impact on the performance while the independence of board size has an insignificant impact on the performance of SOEs.

Abang'a et al. (2021)	Panel data analysis	board meetings, board skills, and gender are significantly and positively associated with SOE performance
Larasati and Prasetyob (2019)	Data were collected from 89 SOEs	The findings did not support the relationships
Nurharjanto et al. (2018)	Data were collected from 94 SOEs of Indonesia	Corporate governance has a positive influence on financial performance
Kabir and Thai (2017)	OLS	corporate governance features like board size and board independence strengthen the positive relationship with financial performance
Locke and Duppati (2014)	Empirical study	Findings supported the relationships
Wahyudin and Solikhah (2017)	Data were collected from 88 firms	CG of go-public companies in Indonesia affects their accounting-based financial performance
Lindermüller et al. (2022)	Hierarchical mixed linear model	Sample focus on financial and nonfinancial performance

2.5 Government Intervention

Regime can intervene state's economy through policy making and socio-economic situation. According to (Kotabe et al., 2016; Yu et al., 2019; Yu & Main, 2010) in general, GI and involvement in the country's economy is managed by adopting two different and possible methods. Firstly is to regulate and control the private sector which does not perform direct production by implementing appropriate and suitable economic policies. The second method is by mass production. And this is possible only by not imposing and commanding controls on the private sector. In reality, however, policy interference is in the context of a mixed approach within the economy. The intervention and interference by state appears to have caused control and improvisation. In the economy and industry, there are

a number of conditions of structural transformations. This can be happened, no matter what the historical condition of a country's economy is (Bala, 2006).

In the financial crisis, neo-liberalism and market fundamentalism have revealed in recent times that there are some requirements of business world. These needs would not been able to be fulfilled if there is no regulatory framework and suitable macro governance (Yılmaz, 2019). There is the need for an adequate governance architecture framework with the right elements of state and regulatory agencies' surveillance, control, regulation and intervention. Public policy makers must understand this. There must be optimum and finest room for growing industry to thrive. There is a need to develop appropriate and favourable regulations and balances by institutions. The vision and concept of a modern private company has not been realized in this situation. The concept of the private firm that develops without any equality or state owned commercial activity is considered out of fashion. There is a need to change this vision. Alternatively, the possibility of undue nationalism and protectionism is terrifying (Reddy & Padmakumar, 2008).

There is a lot of the development that took place during this time. So there is a need for the active position of the state and the legislative process. And the process should make sure that structural risk can be minimized. The risk can be minimized at numerous stages of the government. This condition required that there must be the presence of law enforcement agencies. These agencies must focus on proper accountability and transparency. The company law enforcement act certainly influenced the professional and managing directors' daily lives. In the existing situation the act was necessary to intervene the relationship amid the power steering media and money. The association has complex relationship that exist between the legal system of the company and economy. This relation is inclined locally,

countrywide and worldwide by different forces. A dynamic association is the focus of a higher degree of debate that offers justification enough to say that legislative proposals have an impact (Heneghan & O'Donnell, 2007).

In the 20th century, the existence of SOEs began to come out. In situation where the market is considered as a complete failure, this came out primarily as a vehicle for state intervention. Economists generally have confidence in government ownership of SOEs that can be acceptable in cases of market failure. And also in some cases where the governing tools are not effective (Hart et al., 1997). The state owned enterprise is driven by traditional market failure practically. Nationalization is undertaken to promote economic development through industrialization. This includes keeping employment and restricting foreign ownership. There is a clear argument that privatization will boost and enhance performance. In this situation, the existence reason for SOEs becomes less important (Haggarty & Mary, 1997; Nurharjanto et al., 2018), and, in fact, between the 1980s and 1990s, large-scale privatization took place. However, in the developing countries, despite the efforts to privatize, the role of SOEs remains extensive in many countries (Globerman & Shapiro, 2008; Li et al., 2014).

SOEs are government-owned and controlled economic entities where their revenues come from the sales of goods and services (Hu & Leung, 2012). Basically, the SOEs are the companies or organizations that are managed by the government employees of the country. In some SOEs government has the full share of the company and in some companies government has minimum shares by selling the government shares to the private companies. It has been observed that in the companies where there are maximum share are completely owned by the employees of the government and have total control on the

organizations while in companies where government has minimum share are managed by the representative of the private company and in such companies government has lowest influence on the operations of the company. However, this idea does not take account of otherwise funded operations of the public sector. The public sector such as education, health care, maintenance and road building are usually from revenues of government. Furthermore, financial companies hold different nature and have historically been exempt from state enterprise records.

The definition of the SOE is varies from one country to other country and to some extent the definition also changes in the country depends upon the nature of the enterprise managed the government. Some SOEs are managed directly by the government and some are managed indirectly. Such as the agriculture sector of the country is managed by the government indirectly and have little influence on the sector. But on some companies government has the full control and manage that company by the local government such as utilities and small companies operating in the towns of the country and fiscal resource requirement (Kowalski et al., 2013). Hence, the data on SOEs, tend to underestimate, their comparative trade and industry (economic) importance.

SOEs are typically dealing with specific circumstances and a broader spectrum of governance issues. These dealings are different than those private companies. SOEs typically have an unclear and vague the objective that may be conflicting. Even though proprietorship of that firm is based on single ministry and also have a primary aim of increasing capital that is dissimilar from private companies. Alternatively, the SOEs have a wider purposes, which is a combination and mix of social, financial and political purposes (Lazzarini & Musacchio, 2018; Nurharjanto et al., 2018). If a SOE is passive, the director

does not completely grasp the company's social priorities. But if the SOEs aren't passive, the organization experience and go through from undue political intervention. If the business market is not optimal, then political players and state are able to manipulate a company's money for their own and community purposes. Most importantly, the complexity of CG can be said to stem from the fact and detail. The detail that there is an intricate chain of agents. And this is not concisely defined by the Principal. An SOE has many participants in a decentralized ownership model, including local government and the different state agencies. If we discuss the centralized model, then even in this model there may be various stakeholders such as interest groups, parliamentarians and the SOE itself may be the principal. Complex chain organizations can involve various levels of government.

These can pose challenges where such relationships are not common between shareholders and managers of SOEs. Therefore, formalized rules and regulations are made to resolve the complex situations and such decisions are useful in providing the guidelines for accountability and employees feel responsibilities. The problem further grows when the SOEs are not a licensed business and does not matter to capital market regulations (OECD, 2006).

The literature on SOEs actions and their contact with government reveals remarkable diversity. In essence, the relationship between the two is the opposite as one can define. Many times the government agents tries to intervene the structure of the SOEs by forcing the mangers to follow their political goals and deviates the managers forcefully from the formal rules. When such phenomenon happens then it is said that the managers of SOEs are cooperative and in such conditions the managers of the companies act as the obedient

to the political government. These further works together in accomplish the political and social objectives. Yet, there is a possibility that SOEs will be almost fully autonomous in practice (Cecchetti et al., 2018; Hafsi, 1985).

2.6 Underlying Theories

2.6.1 Agency Theory

The theory of agencies is the term that explains that specific relationship between principal and agent based on contractual basis. The partnership between agencies is oldest. This is also the most popular mode of social interaction. The relationship of the agency occurs amid two or more than two parties. Moreover, when one party elected as director, actions for a proxy of another designated principal in solving matter problems related to decision making. All these contractual relationships basically are important elements of organization, such as relation between employees and employers or state and the governed (Ross, 1973).

A relationship of agency is basically a contract in which one individual administrate someone else on behalf of the principal to conduct a service. The designated agent chose the best option that benefited to principal. If both parties or sides seek out to optimize the company's worth, (Jensen & Meckling, 1976) it is assumed that the organization should behave in a consistent manner with principal's interests.

The theory of the agency is linked to the conclusion of two main problems, may arise in relationship on the agency basis. The initial issue is arises that time when there is a conflict or differences between the intentions of principal towards an agent. Second problem arises

when there is cost difficulty or verifying what agents are in fact doing. The principal is unable to authenticate it, if agent has performed properly. The risk sharing is another problem that arises when there is a different kind of risk attitude between principal and the agent. The main problem is when agent and principal choose and prefer different actions. There is also a difference in risk preferences (Eisenhardt, 1989).

The theory of the agency should clarify how the relationship is better governed when one party known as principal decides the nature of work performed or completed by another agent party. This theory argues and suggested that uncertain and asymmetric information situation creates problems that characterizes and distress business environments. The two well-known problems for firms are known as adversarial type of selection and the ethical threat. Under adverse selection, the principal remains unsure regarding the accuracy of work performed by the agent for which he is being remunerated. Under moral hazard the principal is unable to verify that a maximum or greatest effort has been proposed by the agency or not (Eisenhardt, 1989).

In fact, basic premise of CG is underpinned in the agency problems arising from the two fundamental issues. These issues are separation of ownership and control (Eisenhardt, 1989; Khalid et al., 2019; Panda & Leepsa, 2017; Yusuf et al., 2018). For this reason agency theory is regarded as most important to study of CG. The theory of the agencies gives argument that stock ownership is commonly owned in modern companies , leading to the required management acts to optimize returns and protect shareholders ' interests (Berle & Means, 1932). The concept of theory of agencies developed by Jensen and Meckling in 1976. This concept can be used to describe the American economist's view (Coase, 1937). He explains that this theory refers only to the management of BOD. The hypothetical view

is established on the certainty, individuals are more self-concerned and self-interested than altruistic. We can't trust them to do something in the best benefit or interests of others. They rather are concerned with their own benefit. The theory elaborates the nature of relationship among various parties such as directors, contract shareholders and other stakeholders. Hence, the boards of directors perform as an agent for such stakeholders and are more likely to make decisions that are in the interests of these stakeholders. Therefore, checks and balances are needed to reduce enforcement costs for managers' failure to comply.

The theory of an organization applies to a company's ownership structure, how the board handles the owners' interests and how the processes are designed to balance the owners' and executive interests. It also relates to the management of the processes that operate and avoid acts that obviously do not adhere to the interests of the principal. Such acts may include as neglecting or fraud with agent. This framework is converted into a type of board organizational structure, policy-setting rules, monitoring, control systems and strategically decision making processes. Also affects risk management process. All these elements are the integral and vital parts of the business.

The framework of the entity can be implemented in a number of environments. The environments may be ranging or categorizing the specific issues on the macro level like regulatory policies to the micro level issues like lying, fault management, perception management, and lying. Much of the theory of agencies is applicable to phenomena of organization.

The separation of proprietorship has generated many differences between the management, executives and shareholders. The disputes were also main reason by the different priorities

between management and shareholders in terms of details. The management which runs a company has the ability and opportunity to maximize their own benefit at the shareholders' expense because there is conflict of interest. Contract alone isn't always enough to settle this dispute (Hart, 1995). As a consequence, owners have justification to create the frameworks for controlling management activities and restricting inappropriate managerial activity (Jensen & Meckling, 1976). So, developing a structure for CG can assist shareholders to reduce or diminish the conflicts with agencies.

The conflicts are varies in agency business among companies in cross sectional way. This depends basically on administrations' convenience. That how companies are easy in implementing certain preferences and choices. This approach may be opposite to maximizing the profit. There will also be difficulty in operating the business environment of the business. This also depends on the attractiveness of additional bonus and income (Jensen & Meckling, 1976). These variances in agency business conflicts between firms require suitable and satisfactory governance structure to deal with the problems within those firms. Accordingly, the relationship may not be uniform between the different governance mechanisms and different performance of the organizations. Thus, to carry out a detailed study of the governance role in influencing the company output and other organizational choices and it also important to take the step backwards and analyse how these governance structures have evolved and differentiate from each other organization (Dey, 2008).

Many of the empirical research on CG are embedded in the theory of the organization. These are related to the correlation between corporate efficiency and governance. This is the common assumption that the company will be operating more efficiently and

performing better, if the problems between managers and shareholders are handled effectively that are mostly principal and agent problems. The main foundation of current model of this study is that the manager participation in contract as an agent and shareholders participation as a principal and can appoint in some selfish behaviour. They may not agree with the ideas of wealth being maximized for shareholders. Shareholders can use a variety of CG frameworks to restrict this management opportunism, including management oversight by the BOD and joint oversight by managers Fama and Jensen (1983) sometimes broad shareholder control too (Demsetz & Lehn, 1985). In accumulation, the mechanism of internal management may take account of a numerous incentives that are equity based. As final point different external factors can control or restrict managerial opportunism, that factor includes product competition, threat of takeover, and managerial labour markets etc (Zhou & Guillén, 2019).

2.6.2 Resource-based Theory

The basis for a firm's competitive advantage lies primarily in the delivery to the client of a bundle of useful tangible or intangible resources (Barney, 2002; Penrose, 1959; Wernerfelt, 1984). Resource-based theory implies that variances in the FP of a client are primarily the product of sector-wide IC variability (Wernerfelt, 1984), rendering IC a strategic advantage for the reason that probable correlation between IC and organizational performance (Ji et al., 2019).

The conceptual model of this study is based on the Resource-Based View (RBV) principle, which suggests that the ownership of unique resources provides a competitive advantage (Chung et al., 2019; Wernerfelt, 1984). He has divided the resources of the company into two resources tangible and intangible which are used to produce income. Resources in his

article will create the competitive advantage of the firm after it is difficult or hard for the rivals to access or imitate them. According to Wernerfelt (1984), unique resources that provide value to a firm are not limited to physical resources, but can encompass any factor that contributes to the firm's value creation.

After some time another researcher Barney (1991) expanded the principle of resource categorization into three classes. The classes are physical resources, organization and HC. Such resources among companies are heterogeneous, special, uncommon and non-tradable; and have an effect on firm results. He suggested that the success of a company is directly proportional to the level of innovation of its products. Specifically, the greater the degree of differentiation of a product from its competitors, the more positively it impacts the company's performance.

According to (Gellweiler, 2018), the RBV focuses on the resources that are owned and controlled by a firm, including the firm's deployment capabilities. It addresses the question of how resources can be utilized to enhance the firm's capabilities. This will help to increase long lasting competitive advantage of companies (Crowther & Seifi, 2016; Galabova & Ahonen, 2011a; Khan, Yang, et al., 2019; Mohammed & Irbo, 2018; Silva & Ferreira, 2019; Tonial et al., 2019; Torres et al., 2018). Resources that are valuable, rare, difficult to imitate, and non-substitutable can lead to a sustainable competitive advantage for a company (Barney, 1991). This means that companies can have a better performance if they possess unique and valuable resources that are difficult for competitors to obtain or imitate. New product development, innovation, and creativity can also contribute to a company's competitive advantage. Khan, Yang, et al. (2019) supported this idea by stating that the

more complex and important the combination of resources and capabilities, the higher the chance for a company to gain a competitive advantage.

According to the RBV theory, resources are assumed to be heterogeneous among firms, and when resources are homogeneous, they do not make any unique contribution to a company's competitive advantage. The theory states that resources are a complex production factor that can be built over time and have the power of differentiation among firms. Such resources are most likely scarce and important because they are small (Priem & Butler, 2001). Pondering on KBV's statement, if all businesses have the same capital, there will be no competition because they create and manufacture the same goods and services.

Additionally, RBV suggests that a firm's competitive advantages come from its unique and firm-specific capabilities that enable it to create innovative and distinctive products or services that are difficult for competitors to copy or replicate. Seleim and Khalil (2011b) referred to these resources as a collection of INC that plays an important role in establishing and maintaining advantage because of its non-replaceable existence and hard to replicate. It is evident that companies like Disney Corporation and Newell Company have developed a variety of capabilities to gain a competitive advantage in the market, primarily based on their innovative capacity (Montgomery & Collis, 1995).

Moreover, resource owners represent a company's ability to decide what activities or strategies a business can follow (Tseng et al., 2004). An example of this could be that companies with a greater number of technical employees may be more likely to create patents than companies with fewer technical employees in the same industry and setting.

Having a larger number of technical employees in an organization means there are more people with specialized knowledge and skills to contribute to the development of new products or services. This can increase the organization's ability to innovate and bring new ideas to market, ultimately leading to increased competitiveness and success.

RBV emphasizes that a firm's intangible resources and capabilities, including intellectual property, are critical in generating sustainable competitive advantages (Delgado-Verde et al., 2011). Since these tools are powerful, companies would be gifted and capable to thrive, compete, and succeed. If we accept this point of view, the study focuses on evaluating the firm's basic resource in deciding firm output. These are INC and the components of this capital.

2.6.3 Resource Dependence Theory

The resource dependence theory considers relationship between two parties. The first party will exert control over the second, particularly in the case that the latter is resource dependent on the former. The conventional approach for the power relationships is to incorporate those having control inside the firm and connect their goals with the goals of the firm (Pfeffer & Salancik, 1978). Hence, in the case of businesses that depend on government funding, either in the form of acquiring loans from state-owned banks or in form of supportive legislation for an instance, managers of such businesses can incorporate the government by appointing politicians into their boards of directors, or even compensating for success schemes, to guarantee that their interests are aligned with the interests of businesses. For SOEs, though, politicians are already on their boards and the politicians are to be expected to have named them. Politicians will therefore also seek to

steer the firm in following political agendas of little interest to the business but of high importance to the politician. An alternative way of reducing the power of these politicians would therefore be to rely less on government funds and to help them (Noreng, 1992).

Theory of resource dependency provides a theoretical view of CG. According to this principle, an organization's governance provides the organization with critical tools to improve its output (Pfeffer & Salancik, 1978). Nevertheless, no clear concept is clarified in academic literature to determine the essential resources (Nicholson & Kiel, 2007). Nevertheless, scholars in the social sciences pay attention to three forms of relationships, i.e. the relationship with rivals (Mizruchi (1996), capital access (Stearns and Mizruchi (1993) and the board called economic leaders (Useem, 1984). According to Baysinger and Butler (1985), the board is considered to be vital and important organizational tools as activators of the adoption and implementation of strategies. As Baysinger and Butler (1985) observed, directors are typically linked to outside HC and obtain superior exposure to external resources and ultimately contribute to firm success in a positive way.

The theory of resource dependency proposed that if an organization has a high propensity to interact with the macroeconomic environment then they are more reasonably to achieve better firm results. Nonetheless, low levels of interaction with the outside world are associated with lower access to resources and thus result in poor performance (Nicholson & Kiel, 2007). Although the theory is commonly appraised by the theory of organization and sociology, it is not clear whether directors use external resources for their own benefit or for the good of the company. One of the most important considerations when actively studying the aforementioned philosophies is that of overlying characteristics. For example, according to agency theory, ID in their monitoring and control position serve better to

organizations and shareholders. At the other hand, stewardship theory supports inside executives when managing operations as they are able to better handle the company properties. Resource-based theory, however, offers an ideology that aligns those two theories. The theory has proposed that insiders' cooperation with outsiders (politicians and bureaucrats) leads to greater access to outside capital (Nicholson & Kiel, 2007).

This argument is also associated with the study paradigm as the theory of resource dependence suggests outsiders (politicians and bureaucrats) are the source of resource provision within the business. These resources include taking adequate financial decisions, helping to formulate a strategy, facilitating access to innovation and external relations, administering guidance and suggestions, and enhancing the company's perceived outside prestige (Hillman et al., 2009). According to the theory of resource dependence within and outside people are therefore dependent on success, the policy of the firm and the external world. All internal managers and independent managers may have a positive effect on company results as long as they put capital into the organization (Pearce & Zahra, 1992). The hypothesis also claimed that the diversified board and financial experts were bringing in the company new tools that increased its value.

2.7 Research Framework

The hypothetical structure is a collection of similar concepts that provide guidelines for research and help in explaining the relationships between the factors. Basically a theoretical framework helps in explaining the relationships of multiple independent variables with the dependent variables. Such explanation of the variables is performed on the base of the relevant literatures and well-studied knowledge through observations and interviews. Thus such knowledge helps in the proposing the relationships between

variables while conducting a research. Developing a logical structure helps to imagine and hypothesize. This further helps in evaluate relationships and enhance understanding of the situation's dynamics.

Bougie and Sekaran (2016) described the three characteristics while formulating a theoretical framework. The conceptual model of the study explains the proposed relationships concerning the independent, mediators, moderator and with the dependent variables. The theoretical basis for much of the existing CG system is derived from the findings of (Berle & Means, 1932) classical research, which defines the problem of agency in present organizations as one that emerges from the separation two things. These are called ownership and control. There are many approaches to describing and coordinating CG in adding up to the philosophy of agencies.

Very often it is believed that the distribution of authority and expertise within corporate institutions reflects the American political and legal structures. Hawley and Williams (1997) suggest that variations exist on the basis of four separate schools of thought. These schools include main agent theory also called domination, political, stakeholder and service approaches. Given the plurality of hypotheses, their position in the debate differs. The theory of the principal and agent acting a leading and governing character in the whole discussion. The following focuses on the theory of the principal agent which gave its supremacy and dominance in the continuing debate on the governance of the organization (Dühnfort et al., 2008). At another hand, the theory used for INC is resource-based theory as it generates the gap and makes the financial output of SOE's results heterogeneous.

Intellectual Capital

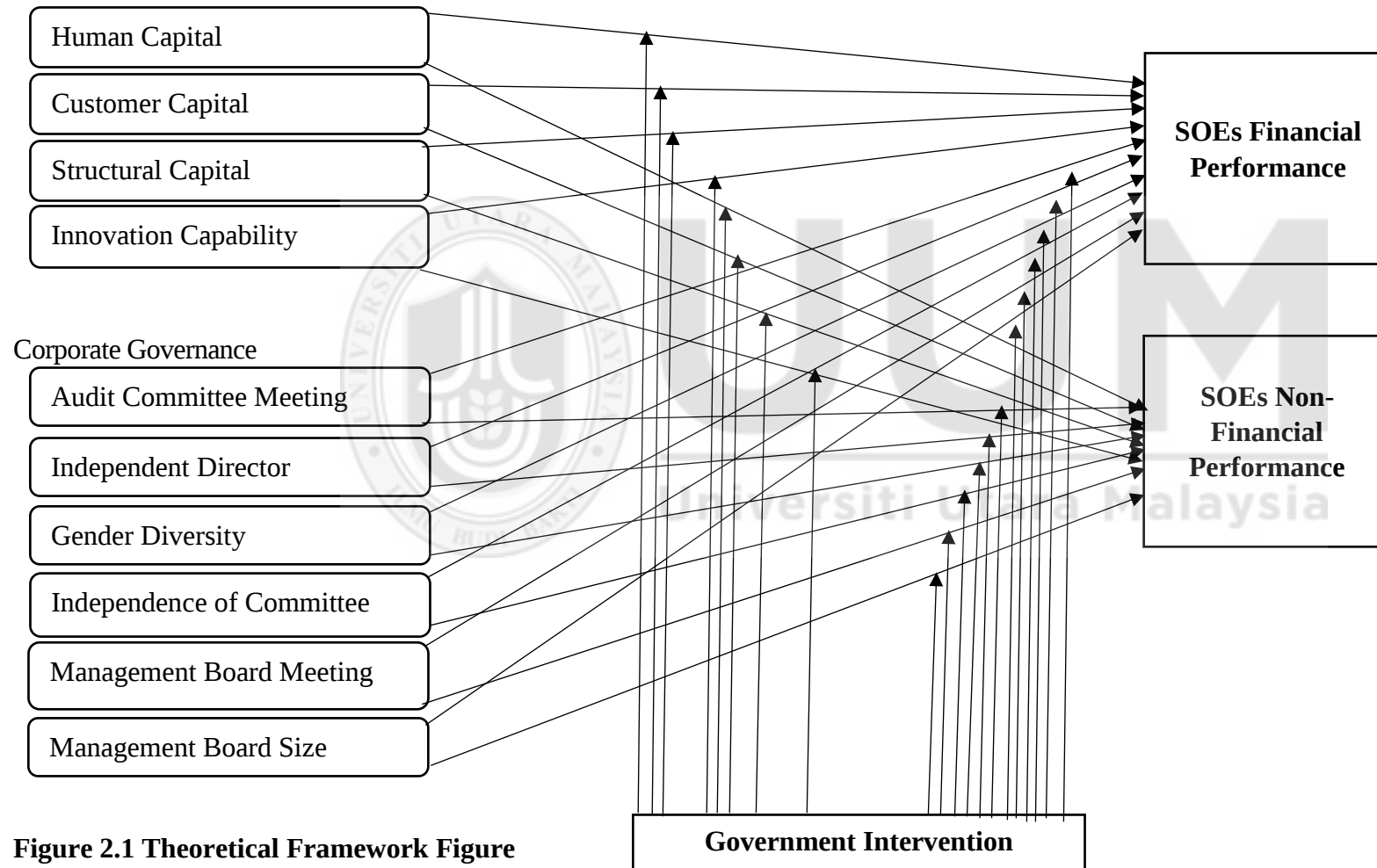


Figure 2.1 Theoretical Framework Figure

In Figure 2.1 the study's theoretical structure shows the possible relationship between INC and CG. Government interference plays as the moderating role with output of SOE. The paradigm is based on the theory of the organization, the theory of resource base, and theory of resource dependency, both with the relationship between INC, CG, and the output of SOEs over and above on the moderating variable of government interference.

The organization theory explains the associations between the stakeholders, agents, individuals and executives who have the control over the organisations. Such theory explains the conflicts between the agents and managers effectively and efficiently. Such conflicts are ambiguity and have risks and doubts but the managers resolves such problems on the base of the theory. Because on the base of the theory, the managers have the confidence over solving problems effectively.

So, the principal recognizes a level of the risk in which the research will not be performed in a way that will assist to achieve his objectives for the reason that the agents are not capable to perform the job. They will avoid their obligations or follow their ultimate objectives in the first choice and fondness to the principal agents (Mitchell et al., 2016).

On the other hand, the theories of resource-based and resource-dependence explain how companies treat their intellects and rely on government institutions. Corporations need assurances and loan programs and that won't happen without government assistance. Both theories are central to the framework for this analysis.

2.8 Hypotheses Development

Hypothesizing, based on defining the variables that measure association between the variables. The current research examined the relationship of INC and CG on financial & SOENFP of the firm with moderating role of GI. Strong CG has primary objective to find a way out to the issue with the principal agent. The principals are the financial suppliers of the business also are the shareholders. They want to find out a technique to make certain that their investments are managed by the agent (management) in such a way as to achieve optimal returns for shareholders and the other stakeholders by (Ehikioya, 2009).

The Code of CG provides the business community with reference when applying GCG. The code outlines the steps that are going to take in establishing a check and balance mechanism, ensuring transparency. Since the late 1990s, CG codes have been released, and they repeatedly called for better business results by implementing guidelines on CG. This result can be interpreted as better market performance or better performance in operations (Bauwhede, 2009). The relationship between compliance with CG provides guidelines. The operating performance is expected to improve. The improvement depends on the basis of the claim that companies with a strong CG system will function efficiently and capably (Jensen, 1993). But the results of the studies show that practically the relationship between governance and operational efficiency is mixed.

For example, Larcker et al. (2007) found the confirmation of significant positive associations between the governance and ROA of the listed companies of USA. Alternatively Bauer et al. (2004) describes the negative relationships between the governance and operations of the firms of European countries. In such circumstance, researchers used the agency theory in describing the aforementioned phenomenon. This is

also used to the financial results of the Pakistani SOE as a partnership between principal and agents. Good CG in this regard would contribute to improved financial results for the company.

Good CG is necessary with the aim to achieve better company performance and to avoid the takeover of shareholders. Also to ensure better management decision making (Ali Shah et al., 2009). The predicted change is that stock prices should respond to the news of improved CG instantaneously. Nevertheless, there is still fairly limited quantitative evidence that is supporting the relationship between standards of CG and corporate performance (Asian Development Bank, 2007).

The theory of the agency suggests that improved CG enhance the stock prices and enable the managers of the organization to manage the things and reduces the operating cost of the organization. Research has shown that as the CG enhances the performance of the enterprises also increases and this has been confirmed under the agency theory (Claessens & Fan, 2002).

2.8.1 Human Capital and SOEs Performance

HC (Chen et al.) refers to the organizational leader's skills, skill, perceptions, and attitudes. Other researchers describe HC as information, competences (Amin et al., 2018; Joshi et al., 2010; Kengatharan, 2019; Martinez-Roman et al., 2011; Phusavat, Comepa, Sitko-Lutek, et al., 2011; Roos et al., 1997; Seleim & Khalil, 2011a). According to (Phusavat, 2011), human capital represents the collective capacity of a firm's workforce that determines its performance. Similarly, (Alipour, 2012) emphasized that the efficiency of a nation's human capital is a critical factor in determining its economic capacity. Different individuals have

different levels of knowledge and understanding. Better quality of HC implies better skills in problem solving. This helps in creating value development, and resulting better in efficiency.

HC refers to the collection of wisdom, knowledge, competencies, innovativeness, commitment, skills, attitudes, and experiences that exist within individuals in an organization. This aggregation cannot be easily imitated or applied by other firms, according to previous literature (Cabello-Medina et al., 2011; Campbell et al., 2012; Seleim et al., 2007). Indeed, human capital is a crucial factor for firms to achieve sustainable competitive advantage and superior performance (Seleim et al., 2007). It enables firms to respond quickly and effectively to the changing market conditions, make informed decisions, and innovate. Additionally, firms that invest in human capital development tend to have better employee retention rates, increased employee satisfaction, and a positive organizational culture (Cabello-Medina et al., 2011). Human capital can also serve as a source of competitive advantage when it is combined with other resources and capabilities. Therefore, firms need to invest in the development of their human capital to ensure long-term success and competitiveness in the marketplace.

Indeed, the contribution of human capital to financial outcomes and competitive advantages is well-established in the literature. High levels of HC have been shown to positively impact various financial indicators, such as profitability, return on investment, and market value (Bontis, 1999; Subramaniam & Youndt, 2005). Additionally, firms with a strong focus on HC development and retention are more likely to attract and retain talented employees, which can lead to enhanced innovation, better decision-making, and improved customer satisfaction (Ling, 2012; Wang, 2016).

On the basis of the above discussions on the relationship between HC and the FP of a company, this study examines whether there is a positive association between HC and the FP of a business in Pakistani SOE with the following hypotheses:

H1a: Human capital is positively associated with SOEs financial performance.

H1b: Human capital is positively associated with SOEs non-financial performance.

2.8.2 Customer Capital and SOEs Performance

Customer capital is considered as a valuable resource for a firm, as it reflects the degree of customer loyalty and satisfaction, which in turn leads to customer retention and positive word-of-mouth advertising (Bontis et al., 2002); Edvinsson, 1997). It is important to note that customer capital can only be accumulated over time through the establishment of positive relationships with customers, which requires a firm to invest in building customer trust and satisfaction. The more a firm invests in building customer capital, the more likely it is to enjoy repeat business and positive referrals, which can ultimately lead to higher profits and improved firm performance (Bontis et al., 2002); Wang, 2016). CC encompasses the relationship and trust that an organization has built with its customers, suppliers, partners, and other stakeholders. It is characterized by a mutual understanding of expectations and obligations, shared values and beliefs, and a willingness to cooperate and collaborate towards common goals. The effective management of CC can lead to increased customer loyalty, higher levels of repeat business, and improved reputation and image of the organization (Bontis, 1998; Cegarra-Navarro & Sánchez-Polo, 2008a; Cegarra-Navarro & Sánchez-Polo, 2008b; Dewhurst & Navarro, 2004; Kale et al., 2000; Rodríguez-Aceves et al., 2022; Zahoor & Gerged, 2021).

CC plays a crucial role in creating value for the firm, as it enhances the reputation and image of the company in the market, increases customer loyalty and retention, and fosters long-term relationships with stakeholders (Rodríguez-Aceves et al., 2022). Moreover, CC enables the firm to acquire valuable information and insights about the market, customers, and competitors, which helps in developing new products and services that better meet the needs and expectations of the customers (Bontis, 1998; Kale et al., 2000; Rodriguez-Aceves et al., 2022). Overall, CC contributes significantly to the firm's competitiveness and long-term success. CC can also help a firm build trust and credibility with its stakeholders, which can enhance its reputation and brand image. In turn, this can lead to increased customer loyalty, repeat business, and positive word-of-mouth referrals. Overall, CC is an important resource for firms to leverage in order to achieve sustainable competitive advantage and superior performance (Cousins et al., 2006).

CC represents all the expertise contained in external partnerships that involve customers, alliances, investors, suppliers, distributors and different distribution networks. It includes cross-boundary connections around the company. Joshi et al. (2010) and Pedro et al. (2018) have described CC as an organization's ability to establish relationships with external elements or external stakeholders. CC involves employee connections and linkages with their alliance partners that are consumers and suppliers by (Seleim & Khalil, 2011b). CC or some scholars use the same concept of consumer capital (Bontis, 1998, 1999, 2001b; Kamath, 2019; Phusavat, Comepa, Sitko-Lutek, et al., 2011; Seleim & Khalil, 2011b) as an intangible asset acquired by

productive relationships with the company's environmental agents that are allies, consumers , or suppliers (Delgado-Verde et al., 2011). It is used in production activities, along with other tools.

With minimal literature available, the study analyses relation between CC and Pakistani SOEs financial results. Following hypotheses are developed:

H2a: Customer capital is positively associated with SOEs financial performance.

H2b: Customer capital is positively associated with SOEs non-financial performance.

2.8.3 Structural Capital and SOEs Performance

SC (SC) refers to an organization's accumulation of information stored in structures, databases, and programs. Bontis (1999) described SC as 'information remaining within the business.' (Karagiannis et al., 2008) defined Structure Capital as the intangible value that emerges from the relationships and interactions between people within a company, and that remains within the organization even after an employee leaves. It encompasses the collective knowledge, networks, and social structures that enable a company to function effectively and efficiently. Various scholars had differing views on SC. Others can divide SC even further into several subcomponents. For example, (Córcoles, 2011) divide SC into technical and organizational capital while dividing SC into client and organizational capital (Phusavat, Comepa, Sitko-Lutek, et al., 2011).

Organizational capital refers to the codified information generated from organizational capacity maintaining contact within the organization. Organizational capital is' an organisation's non-human intelligence storehouse (Alipour, 2012). The concept of

Structure Capital also encompasses systems, methods, and philosophies of operation that facilitate the efficient flow of information within the organization (Malone, 1997).

Codified and institutionalized information requires organizational capital within an organization (Seleim & Khalil, 2011b). Organizational capacity is demonstrated through the practices and customs within an organization, including its culture, principles, and internal procedures. Technical capital refers to the technological resources available to an enterprise, as noted by (Amin et al., 2018) and (Córcoles, 2011), while consumer capital emphasizes the significance of partnerships with those who conduct business with the enterprise, such as manufacturers, markets, consumers, and industry associations, as highlighted (Phusavat, Comepa, Sitko-Lutek, et al., 2011).

An intangible resource of the organization is known as SC that employees are unable to take this away with them when they quite from their responsibilities (Edvinsson & Malone, 1997). SC consist of abilities, databases, practises, trademarks, copy rights, pictures, patents, actions, software, hardware and so on so forth (Kweh et al., 2019; Waseem et al., 2018)w(Aramburu & Sáenz, 2011; de las Heras-Rosas & Herrera, 2021; Karagiannis et al., 2008; Zangoueinezhad & Moshabaki, 2009). It consists of unique methods to perform different tasks and activities, which can barely be copied by any opponents such as NFP.

If companies want to solve their problems efficiently and effectively than invest in SC that enhance the quality of product/service, improves the procedures or process that enrich the quality of work. If the focus of any firm to earn, store, share and apply the knowledge than those firm rely on SC that develop and implement the strategies of the business. This will enhance gradually the ability of to do the right decision at the right time. As a result the company grow rapidly by choosing the higher quality products with lower cost production

(Aramburu & Sáenz, 2011; Zangouinezhad & Moshabaki, 2009). Additionally, SC can likewise provide strategies to avoid needless efforts in the value creation procedure, which assistances to attain desired revenue growth and employee output (Phusavat, Comepa, Sitko-Lutek, et al., 2011).

Above discussions on the relationship between SC financial & SOENFP of the firm in the SOEs of Pakistan with the following hypotheses:

H3a: Structural capital is positively associated with SOEs financial performance.

H3b: Structural capital is positively associated with SOEs non-financial performance

2.8.4 Innovation Capability and SOEs Performance

Innovation is the vital aspect that determines the attainment of a firm (Fan & Lee, 2016; Pratali, 2003). Innovating companies risk underperformance or collapse (Chaveerug & Ussahawanitchakit, 2008). Most researchers agree a firm's ability to evolve is the main reasons for it to thrive and prosper. They approved that innovation has something to do with performance of firm (Chaveerug & Ussahawanitchakit, 2008; Fruhling & Siau, 2007; Phusavat, Comepa, Sitko-Lutek, et al., 2011). Those findings indicate the importance of innovation for the success of firms. Introducing new products or services to the market can have a significant impact on a company's profitability and growth. This highlights the need for firms to invest in innovation and continually develop new products or services to stay competitive (Chaveerug & Ussahawanitchakit, 2008; Fruhling & Siau, 2007). Battor and Battor (2010) additionally emphasised that 700 companies who innovate 13311 products between the period of 1976 to 1981 and enjoyed 22 percent profit and 28.0 percent growth on sales.

While some studies have found a positive relationship between innovation and firm performance, others have found mixed results or no significant relationship (Wu, 2016 ; Wang, 2021; Aljuboori, 2022; Reynaldi, 2022). One possible reason for these mixed findings could be due to differences in the measurement of innovation or performance across studies, as well as variations in industry, firm size, and other contextual factors. The results were conflicting results which connect the two variables to each other. The researcher has sunnitized the findings of previous studies captured the dispute. As far as the relationship is concerned, the researcher is curious and wants to know about any other factors like INC that can affect the capacity for innovation.

Referring (Jaruzelski & Dehoff, 2009; Jaruzelski et al., 2005) there were two studies that were conducted during year 2005 to 2009 by Booz & Company. They analysed the statistical relationship between R&D investment and business results. Then they reported that R&D sales ratio that is the percentage of the income and company spends on R&D. According to (Jaruzelski & Dehoff, 2009), there is no noticeable correlation between R&D and other financial performance (FP) measures. In their study using the Global Innovation 1000 list of companies, (Jaruzelski et al., 2005) found that Intel, ranked no. 12, had expenditures 130 times higher than Cymer, ranked no. 766, but its revenue and R&D ratio was only 14.0 percent in 2004.

However, Battor and Battor (2010) argued that new products face failure rate anywhere and that rate is 40.0 to 75.0 percent. About 50.0 percent of new products launched each year have failed. This rate of failure implies costs that companies must bear which consequently get worse their performance. Because of this, Ibrahim et al. (2009) concluded

that innovation is related to risks closely. So, most companies remain unwilling to commit in innovation activities.

Based on the above mentioned points about the association between innovation capacity and FP of the company, this study measures whether the capacity and FP having the positive link between the company in Pakistani SOEs with the following hypotheses:

H4a: Innovation capability is positively associated with SOEs financial performance.

H4b: Innovation capability is positively associated with SOEs non-financial performance.

2.8.5 Independent Director and SOEs Performance

CG mechanisms, such as the independence of the BOD particularly in oil and gas sectors having the positive effect on the FP. In addition, the independence of the board must be adopted and strengthened at all times to ensure that FP improves.

Lim et al. (2007) concluded that boards of directors that are dominated by business managers (in-house managers) are likely to have poor management. This is because they have the obligation, as an insider, to monitor themselves (self-monitoring). This will create better governance if the board were governed by outsiders as they would serve as impartial witnesses. Implementing better CG is supposed to boost the efficiency of the enterprise, which would eventually increase the value of the business as the investors demand.

According to Peng (2004) that listed companies whose director are independent performance well if these companies measured in term of sales growth. In term of ROE, these companies have little impact. Peng (2004) results are steady by Park and Luo (2001) who claimed that ID primarily focused on revenue progression but not focused on financial impact firm. It reveals that ID interest is gearing up the sales revenue as compare to sustaining the financial position of the firm. As described by Fama and Jensen (1983) that independence to the directors will be vital aspect of governing structure. ID are also seen as a vital characteristic of complete governance structures for the reason that they signify the benefits of the shareholders, carry additional skill and add valuable corporate ties that will all support the company by (Fama & Jensen, 1983).

Political constraints and policy intervention will lead to weak and sub-optimal resource allocations. Government typically interferes with the operations and investments of the SOE for example mergers, directing, employment policy and getting hold of. As an outcome, SOEs continue to prioritize several targets that diverge and move away from productivity and therefore sustain surplus jobs that is not focused on considerations of efficiency and performance (Yu & Main, 2010).

SOEs are often required to meet specific social and public policy roles and obligations. For certain countries this requires a price limit and in such conditions SOEs pay price by selling their assets and this requires well defined rules and regulations. Such government rules provides confidence to the firms in making decisions. In some situations such rules cause problems in selling the SOEs (Tong & Junarsinb, 2013).

This study examines whether there is a positive relationship between ID, financial & SOENFP of the company in Pakistani SOEs:

H5a: Independent directors are positively associated with SOEs financial performance.

H5b: Independent directors are positively associated with SOEs non-financial performance.

2.8.6 Management Board Size and SOEs performance

Formation of the sixth hypothesis is to investigate the relationship between the sizes of the management board to the output of the company. Darmadi (2011) find support to the assertion that that the size of executive board is positively associated to the FP of the company, indicating that larger boards provide Pakistani firms more difficulty in managing their firms. Larger boards are likely to possess more members with skills and experience that would improve the chances of success of the company.

While studying the listed manufacturing firms Hapsoro (2018) provide proof that the BOD,s size is positively linked with the firms' success. The positive link shows that the theory of the agency supports the positive association between the CG and performance while the study of Kumar and Singh (2013) described a negative association between the MBS and company performance. According to Pearce and Zahra (1992), bigger boards enhance the controlling power of the directors, hence the financial success of their firms also increases. Likewise, Dalton et al. (1999) showed that firms having larger BOD are more likely to show better FP.

Politically related companies are companies in which at least one member of their BOD is:

- (i) A former cabinet minister

- (ii) A servant or former parliamentarian
- (iii) A current or former senior government official. The company's financial output run by politically appointed CEOs was also significantly lower than other comparable firms. Political relation will add value to the associated companies and managers. Politically linked companies can benefit from lower tax rate, comfortable access towards the debt financing of the business or the greater market power. So these companies have edge over others (Ang et al., 2013).

Fan et al. (2014) endorsed the claim that bureaucrats and CEOs of policymakers are extracting capital from the listed SOEs that comes under their power to achieve targets that did not compatible with the maximization of firm interest. Size of the BOD positively allied with NFP. Moreover, term is at the will of the BOD. Nonetheless, enhanced term may lead to more impact over the BOD and a plea to lower risk in encouragements (Beatty & Zajac, 1994; Finkelstein & Hambrick, 1989; Gan et al., 2020; Jia et al., 2019; Ryan Jr & Wiggins III, 2001). Indication from Bushman et al. (1996) recommends that CEO tenure is associated with less reliance on FP measures. Gradually, large corporations and big organizations reveal material evidence about their financial and non-financial capital in their combined reports. The intent of these combined reports is to enhance their legitimacy with institutes and stakeholders as they must interconnect all features of their strategic importance, business models, and value creation actions. Simultaneously, one should take into account the variations that incorporated in expansion of the companies.

The link between the BODs size and the SOEs performance,
among the Pakistani SOEs is checked by the following hypotheses:

H6a: Management board size is positively associated with SOEs financial performance.

H6b: Management board size is positively associated with SOEs non-financial performance.

2.8.7 Management Board Meeting and Performance of the SOE

Ntim, (2011) found a statistically significant relationship between board meetings and firm performance. Vafeas (1999) argued that the occurrence of board meetings is related to firm performance and consistent with agency theory, but did not specifically analyse the relationship between the frequency of board meetings and future financial performance.

According to them there exist positive associations between the MBM and performance of the enterprises and it has been also observed in the South African boards that MBM has direct impact on output of the companies. Literature demonstrates board size whether it is small or large have influence on the performance of the firms.

The regularity of Board of the Directors Meetings is a significant indicator of the controlling capacity and efficacy of corporate boards (Jensen, 1993). The ongoing debate on the board meeting of the company shows, the occurrence of board of the directors meetings that influence the performance of the company. The impact of board meetings on financial results may vary across different countries due to differences in legal practices, corporate governance regulations, and cultural factors. For example, in some countries, board meetings may be more focused on short-term financial performance, while in others, they may prioritize long-term growth and sustainability. Therefore, it is important to consider the context and specific characteristics of the company and the country in which

it operates when examining the relationship between board meetings and financial performance (Ntim & Osei, 2011). This is often described as a major weakness in CG by the SOE. There are too many boards that are crowded and packed with people who are selected and preferred the political loyalty rather than business intelligence and wisdom (Vagliasindi, 2008).

These connections with the political parties, leaders, and government are existing only due to political pressure. The political insist that can provide companies many kinds of advantages. These benefits include favoured or superior treatment by state held enterprises (banks etc), lower tax rates, less rigorous regulatory mistake of the enterprise in question and many more. Numerous researches have shown positive effects of the political impact on the financial output of the company (Dicko & El Ibrami, 2013).

Abundant studies in Western settings have suggested that the management board affects the FP of the firm, the percentage of external members of the board and the occurrence of board of directors meetings (Fan et al., 2008; Vafeas, 1999). Vafeas (1999) moreover, found that a company's BOD raises its operation after a output decline. The effect shows that board meetings are very good for the firm's success. The intensity of the BOD' activities will impact the performance of company (Fan et al., 2008).

Based on the previous studies experience, current research tests the association of MBM and the performance of the SOE by taking into account the following hypotheses:

H7a: Management board meetings are positively associated with SOEs financial performance.

H7b: Management board meetings are positively associated with SOEs non-financial

performance.

2.8.8 Gender diversity and SOEs performance

Researchers have usually gaged GD as the role, proportion and the strength of women directors on the board. Though the theory of agencies does not directly address the role of GD, the theory supports a diversified board (Salancik & Pfeffer, 1978). According to Nekhili and Gatfaoui (2013) women are strong monitors and their presence on board can be supported by agency perspective. Women have a higher attendance than male workers Adams and Ferreira (2009), offer new viewpoints on complex topics Francoeur et al. (2008) and take a greater interest in corporate operations by increasing many concerns (Carter et al., 2003).

According to Yasser, (2012), as opposed to their male counterparts, female directors have different kind of cognitive structures (information assessment processes and knowledge search) and therefore affect firm interest. Additionally, female executives are more likely to have good sales and marketing skills Groysberg and Bell (2013) and better colleges and advanced degrees (Carter et al., 2010). Several empirical researches therefore found that GD had a positive impact on firm results.

Several studies have found a positive association between having women on the board and various outcomes, such as stock market performance and operational efficiency. For example, (Nekhili & Gatfaoui, 2013) found that companies with more women on their boards experienced higher stock returns. Similarly, Terjesen, (2015) found that companies with more women on their boards had better operating performance.

However, as noted by Byron, (2016), the impact of women on firm outcomes can be contingent on various factors, such as the level of shareholder protection. Their meta-analysis found that the positive influence of female directors was stronger in countries with stronger shareholder protection.

For instance sample taken from the European companies Christiansen et al. (2016) similarly initiate a positive association among gender mixture with the performance of organization. Using the data of 47 nations, Terjesen et al. (2015) studied that women's representation and performance of firm have a robust plus positive association. Zahoor (2016) stated, from the Pakistani perspective, an optimistic relationship exist between gender representation and performance of organization. Consistent with agencies theory, this study similarly assumes that women in board can control the organizational operations successfully.

In recent years, empirical CG research has placed a stronger focus on these interdependencies. While the majority of the included studies concentrates on FP, a significant increase of research activity can be stated for gender issues (Amorelli & García-Sánchez, 2021; Byron & Post, 2016; Cordeiro et al., 2020; Jain & Jamali, 2016; Rao & Tilt, 2016; Wang, Wilson, et al., 2021; Yarram & Adapa, 2021) during the last years. Despite the controversial discussion since the financial crisis 2008/2009 concerning the impact of women on BOD (WBOD) on non-financial reporting and firm performance, and the international initiatives to strengthen non-financial business practices (e.g., European CSR directive of 2014), a detailed analysis of the state-of-the-art of empirical WBOD research does not exist so far, but is of special relevance for researchers, regulators and practice.

Insofar, there is no literature review on empirical WBOD research so far that analyses both financial and NFP reporting, financial and NFP performance. With regard of the huge interdependencies between financial & SOENFP and reporting issues, we make a key contribution to the existing literature with our literature review.

Research suggests that diversity in the board of directors can have a positive impact on the quality of integrated reporting (Adams & Ferreira, 2009). In particular, having female members in the ACM can bring unique perspectives and experiences that can contribute to integrated thinking and decision-making. Female members can also promote collaboration and cooperation among different stakeholders and departments within the organization, which can lead to better integration of non-financial information in reporting.

Furthermore, female members in the ACM can advocate for external assurance of non-financial information, such as CSR reporting, to enhance the credibility and reliability of the integrated report. This can increase stakeholder confidence and trust in the organization, which can ultimately lead to improved financial and non-financial performance.

Overall, having gender diversity in the board of directors can bring various benefits to the organization, including improved integrated reporting and enhanced stakeholder trust and confidence. This results in improved operational and business efficiency. Accordingly, following hypothesis is established:

H8a: Gender diversity is positively associated with SOEs financial performance.

H8b: Gender diversity is positively associated with SOEs non-financial performance.

2.8.9 Independence of committee and SOEs Performance

There is a lot of causes companies are going to set up the committees. Some committees are formed, for instance, to evaluate and incentive upper administration known as compensation committee. Many other committees also formed to advise the CEO. There is an additional cluster of committees to apply the organizational policies and additional outside aspects such as IOC (Hayes et al., 2004). The members of the board are also the associates with numerous committees. Government of New Zealand proposes that firms will have formed the IOC (Fauzi & Locke, 2012). This will help them to supervise the audit of financial statements. This will also help companies to set up compensation and payments for managers and directors etc. The committees are decisive to make certain that the financial process is well approved and accepted. And make sure that directors are correctly paid. This may justify any problems with the agency (Fauzi & Locke, 2012; Jahan et al., 2021).

Fauzi and Locke (2012) showed that a strongly significant relationship exists between firm performance and the board committees. The authors argue that board committees are likely to exist to improve the efficiency of firms. Group committees are viewed as a key tool for reducing agency costs and thus enhance efficiency of firms.

To date, the evidence on how political relations boost firm interest is mixed. Goldman et al. (2009) found that the political relations acquired by members of the board contribute to

the value of businesses of US. Also, Faccio et al. (2006) found a positive relationship between these connections and firm interest. Fan et al. (2008) report as an important comparison that Chinese firms who are politically allied companies underperform those without firm success. Cross-country analyses performed by Faccio et al. (2006) and Boubakri et al. (2008) indicate that politically associated corporations display low accounting performance (Chen et al., 2017). Similar to their structure and roles, SOE boards of directors also do not participate in the same practices they carry out in private companies. The board of SOE that serve as a kind of parliament representing the interests of workers and different ministries. State ownership and power of government in SOEs are barriers to governance. This may direct to poor and weaken performance. Efforts to strengthen CG in SOEs were, however, weaker as compared to the private sector. In private firms, reforms have been comprehensive from the last decade.

Group committees are formed to assist the commissioners' group in supervising the performance of various company functions needed by the commissioner in carrying out his duties. Each committee's roles and responsibilities should be reported in a Charter. Growing committee will carry out its duties and obligations independently. The committees don't allow any involvement from any party not complying with law. The independent committee's position is required to help administer the company's compliance to comply with the regulation in order to achieve the company's vision and mission.

Bruno and Claessens (2010) found clear evidence in the study of the impact of CG practices and legal performance. The criteria based in 23 countries that businesses follow strong governance practices in the form of independent boards with multiple committees are performing the best under any legal command. The effects of rigorous and strict country

legal CG requirements and supplies are neutral. Companies who own strong boards are less respected when there is a strong country investor security. The idea is consistent and reliable with the hypothesis that if there is an unnecessary supervision and control, then this may damage many managerial activities. This may hold back and delay efficient business operations. Therefore, strong country investor defence will not raising the value disadvantage of poor governance practices from businesses.

With inadequate literature on hand, this study analyses the relationship between committee independence and performance of Pakistani SOEs by developing the hypothesis that follows:

H9a: Independent of committee is positively associated with SOEs financial performance.

H9b: Independent of committee is positively associated with SOEs non-financial performance.

2.8.10 Audit committee meeting and SOEs Performance

The relationship between meetings of ACM and performance of firm with involvement of moderating variable government interference consisting of political pressure and control and monitoring.

Chen and Zhou (2007) distinguished that meetings of audit boards hand out as an important mechanism for promoting CG in companies. It will be likable to reduce financial fraud if the ACM meets regularly and fulfils its duties as necessary Stewart and Munro (2007). It has also been observed that the frequency of ACM positively influences firm performance by Azam et al. (2010). Also Aanu and Odianonsen (2014) establish that the meeting of the ACM showed promising signs about firm performance but it was not relevant.

The number of meetings the ACM holds is a substitute and alternate for the ACM's activity. Consequently, more frequent meetings of ACM will achieve better information related to audit and accounting issues. The problems are directed toward conclusion of existing function of company as soon as they arise. There is an inclination therefore that the if an active ACM exists, it can decrease or diminish the possibility of any financial scam or fraud. So, this further increase and augment the firm performance (Xie et al., 2003),

Government's role in the economic and business growth is a significant factor in the operations of a corporation. The degree of the role of government in business varies from country to country, and from industry to industry within the same country. SOEs will encompass to compete with the private sector. Their success would also depend on their management. Unlike private organizations that concentrate solely on maximizing the wealth and profit, SOEs have several goals and they can collide. SOEs dual function occurs either because they are required by law or by agencies of government in a separate role to control the SOEs. The latter condition is very troublesome if the main concern of ministries is different for SOEs. Their conflicting views are not reconciled (Wong, 2004).

State interference within the firm may be crucial to the firm's enforcement of CG practices. The involvement of government shares in the company may be an implicit contribution to better management practices along with higher monitoring rates. With that situation, the government will put forth more influence to strengthen the company's CG structure (Zagorchev, 2009).

At the meeting of the ACM the main roles are to review the reports of the SOE, internal accounting brings failure to audit process. As carry out these duties, the ACM shall meet periodically with external and internal auditors. This will help to review or assess the firm's internal controls and financial statements.

Regulation defining GCG standards for public companies by laws of the Capital Market and Financial Institutions Supervisory Authority (SECP), such as transparency legislation, independent commissions, ACM, corporate secretary, security of marginal shareholders and so on.

There are very limited reports, to the researcher's knowledge, on the moderating impact of regulation and monitoring on the relationship between ACM and firm results. A little number of studies relates primarily to the management of company results and earnings. As a result, Aanu and Odianonsen (2014) found that the meeting of the ACM showed good performance indicators but was not relevant. Existing literature is insufficient to draw conclusions, particularly in the context of Pakistan, so in accordance with resource dependence theory and agency theory it is formulated to further contribute to the literature. Therefore, this study determines the link between meeting frequency of ACM and performance monitoring of Pakistani SOEs by formulating the hypotheses below:

H10a: Audit committee meetings are positively associated with SOEs financial performance.

H10b: Audit committee meetings are positively associated with SOEs non- financial performance.

2.9 Moderating Role of Government Intervention between Intellectual Capital, Corporate Governance and SOEs Performance

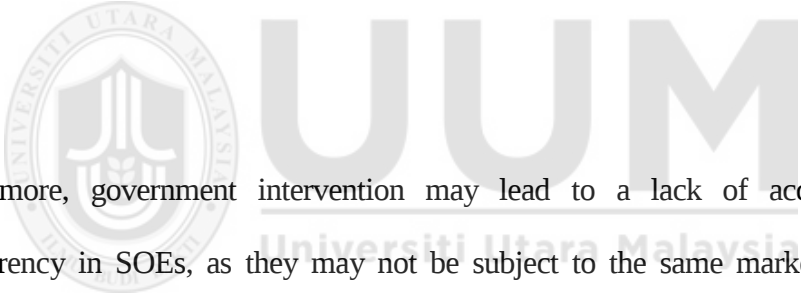
State-Owned Enterprises (SOEs) can be significantly affected by government intervention in terms of their performance. On one hand, this intervention can grant SOEs access to financial resources, technology, and other resources that can enhance their performance. Government intervention can also help SOEs overcome market failures, such as externalities and information asymmetries that could hinder them from achieving their optimal performance. Moreover, government intervention can assist in ensuring that SOEs operate in the public interest and fulfil their social and environmental obligations.

The concept of intervention in this study refers to the government's perceived role in supporting and guiding the growth and development of small business owners. According to Zagorchev, (2009), intervention refers to measures taken by external parties, such as the government, to influence business behaviour, such as through regulatory policies, financial incentives, and educational programs.

According to Wagaman and Segal (2014), government intervention refers to programs and actions initiated or funded by the government to support business performance. On the other hand, the term "intervention" encompasses various government efforts aimed at promoting the growth, survival, and full participation of small-scale enterprises in the socio-economic development of the country, as defined by (Main, 2012).

Only a limited number of studies have investigated the role of government intervention as a potential moderator in the relationship between performance outcomes and their predictors (Kyal et al., 2021).

Furthermore, the development of SOEs is also influenced by the specific economic, political, and social contexts of each country. For instance, some countries may have a long history of state-led development, while others may have more market-oriented economies. The level of economic development, the legal and regulatory frameworks, and the cultural and social norms of each country can all affect the performance of SOEs. As such, it is important to consider the unique characteristics of each country when evaluating the performance of SOEs and the effectiveness of government intervention. Overall, the literature on SOEs and government intervention is complex and multifaceted, and requires a comprehensive and contextualized approach to understanding their performance and impact on the economy.



Furthermore, government intervention may lead to a lack of accountability and transparency in SOEs, as they may not be subject to the same market pressures and incentives as private enterprises. This can lead to a culture of complacency and a lack of motivation to improve performance. In addition, political interference may influence SOEs' decision-making processes, leading to suboptimal outcomes and a lack of responsiveness to market changes.

Moreover, government intervention can also result in unequal treatment of SOEs and private enterprises, distorting the market and leading to unfair competition. This can ultimately harm the overall performance of the economy, as resources are not allocated efficiently.

Therefore, it is essential to strike a balance between government intervention and market forces to ensure that SOEs can operate efficiently and effectively. Effective governance mechanisms and policies that encourage transparency, accountability, and competition can help mitigate the negative effects of government intervention and promote SOEs' performance. Additionally, it is essential to consider the context of each country and SOE and to tailor interventions and policies accordingly to achieve the desired outcomes.

It is essential to strike a balance between government intervention and independence in the management of SOEs. The appropriate level of government intervention will depend on a range of factors, including the nature of the industry, the specific objectives of the intervention, and the institutional context in which the SOE operates. It is also important to consider the potential trade-offs between the benefits and costs of government intervention, including the potential for political interference and corruption. By carefully considering the moderating role of government intervention, policymakers can help to ensure that SOEs operate effectively and efficiently in the public interest.

In the case of SOEs, government intervention may either enhance or hinder the effect of human capital on their performance. If the government provides funding and training programs to develop the human capital of SOEs, this may enhance their performance. Conversely, if the government imposes excessive regulations on SOEs or interferes with their operations, this may hinder the effect of human capital on their performance.

Thus, the moderating role of government intervention is an important factor to consider when examining the performance of SOEs and their relationship with various predictors such as human capital, financial resources, and market competition. It is important to strike

a balance between government intervention that supports SOE performance while avoiding excessive interference that could lead to inefficiencies and reduced innovation.

In the context of intellectual capital (INC) and SOEs performance, government intervention can have a significant impact on the extent to which INC contributes to improved performance. This suggests that government policies and regulations related to INC, such as incentives for innovation and knowledge-sharing, can enhance the performance of SOEs (Aljuboori et al., 2022). However, excessive government intervention can also have negative effects on SOEs' performance. The prevalence of state ownership can lead to differences in the allocation of capital resources for non-economic purposes, such as the maintenance of high employment levels, which may result in lower profitability and efficiency (Lin & Zhang, 2009). In a study by Lin and Zhang (2009), state-owned commercial banks were found to have lower profitability, efficiency, and asset quality compared to other types of banks. Cornett et al. (2010) also argued that state-owned banks tend to have lower profitability, less core capital, and higher credit risk compared to private banks. Similarly, Ting and Lean (2015) found that government intervention had a negative impact on the performance of publicly listed companies in Malaysia. Overall, it is important to carefully evaluate the moderating role of government intervention on the relationship between variables in order to determine the optimal level and type of intervention required to support SOEs' performance while also avoiding potential negative impacts.

Physical capital refers to physical assets such as equipment, buildings, and land, while human capital refers to the skills, knowledge, and experience of a company's employees. Both physical and human capital are important resources for companies to achieve their

objectives and maintain a competitive advantage (Nahapiet and Ghoshal, 2000). However, in the present day, intellectual capital (INC) has emerged as a critical engine of production (Denicolai et al., 2014; Hejazi et al., 2016; Manzaneque et al., 2017; Scafarto et al., 2016). The impact of INC on firm performance is still a topic of ongoing discussion, and researchers have investigated this relationship in various industries and regions (Kanchana & Mohan, 2017; Nawaz & Haniffa, 2017; Ramírez et al., 2017; Scafarto et al., 2016). However, there is empirical evidence that suggests a positive association between INC and firm performance. For example, Kharal et al. (2014) conducted in Pakistan found a positive correlation between INC and firm performance in the oil and gas industry, whereas Sardo et al. (2018) argued that INC is essential for firm value creation in Western European countries.

Many of the previous empirical studies have not taken into account the impact of shareholders or owners who are the primary users of intellectual resources in the value creation process. Therefore, there is a need to further examine the impact of INC on the performance of the firm while considering the moderating effect of various factors, such as governmental presence, on this relationship.

Government influence can have both positive and negative impacts on the usage of intellectual resources and firm performance. While some studies, such as Wolf (2009) have found a positive relationship between government intervention and SOE performance, other studies have highlighted potential negative effects. For example, Ting and Lean (2015) discovered that publicly listed companies in Malaysia experienced a decline in performance due to government involvement. Similarly, Lin and Zhang (2009) determined

that state-owned commercial banks were less profitable and efficient than other types of banks.

The moderating role of government intervention in the relationship between INC and firm performance is a complex issue that needs to be further explored. Government policies and interventions can have a significant impact on the utilization and development of intellectual resources within firms, which can ultimately affect their performance. Therefore, it is important to understand how different types of government interventions, such as regulations, subsidies, and taxation, may moderate the relationship between IC and firm performance. This is especially true considering that INC is an intangible resource that can be difficult to quantify. While some studies have found a positive relationship between IC and firm performance, it is important to consider the role of government influence in determining the optimal level of IC usage for SOEs.

The impact of government influence on corporate operations has been a topic of criticism in terms of its negative effects on corporate value creation. State ownership dominance can lead to the diversion of capital resources towards non-profit uses, such as maintaining high employment rates, instead of maximizing profit. This can negatively impact the company's financial performance in the long run. Furthermore, the lack of external monitoring and accountability can lead to managers and directors making decisions without bearing full responsibility and risk, since they are not subjected to market discipline. This can potentially lead to poor decision-making and lower overall performance (Oliver et al., 2014).

Lin and Zhang (2009) discovered that state-owned conventional banks in China have lower profitability, efficiency, and asset quality compared to other types of banks. Similarly, Cornett et al. (2010) observed that state-owned banks generally exhibit lower profitability, hold less core capital, and face higher credit risk compared to private banks. They conducted their study across 56 countries, and their findings were consistent across both developed and developing economies. The study also found that political corruption is negatively related to bank performance.

Ting and Lean (2015) investigated the impact of government ownership on the performance of publicly listed companies in Malaysia. They found that government ownership negatively affects the performance of firms, and the negative effect is greater for firms with higher levels of government ownership. The study suggests that government ownership may lead to inefficiencies in corporate decision-making processes and the allocation of resources, which can result in lower firm performance.

Effective corporate governance is critical for SOEs to achieve their objectives, and government intervention can play a crucial role in shaping the governance practices of SOEs. Government policies and regulations related to corporate governance, such as guidelines on board composition and responsibilities, transparency requirements, and whistle-blower protection, can help ensure that SOEs operate in a transparent and accountable manner. This can lead to better decision-making, improved risk management, and ultimately, better performance. However, it is important to note that government intervention in corporate governance can also have negative consequences, such as political interference and lack of independence, which can harm the performance of SOEs. Thus, it

is crucial to strike a balance between government intervention and corporate autonomy to achieve optimal performance.

Studies have examined the role of outside directors with political and legal backgrounds in government intervention in company operations (Yu, 2019; Main, 2012). These directors are thought to possess the expertise and connections necessary to navigate the complex regulatory and legal environment that firms face, especially in heavily regulated or government-scrutinized industries. However, the effectiveness of government intervention through outside directors remains a matter of debate, as some argue that it can lead to conflicts of interest or an undue influence on corporate decision-making.

Regarding the impact of political connections on firm performance, Faccio, (2006) found that politically connected firms tend to have weaker governance characteristics, and their CEOs have a strong influence in state politics. These firms also tend to have lower levels of professionalism and are more likely to experience government favouritism. Moreover, politically connected firms are more likely to underperform compared to unconnected firms.

Overall, while government intervention through outside directors may provide benefits to firms, such as better access to funding, it may also have negative implications for corporate governance and performance, particularly when political connections play a significant role. Political connections to the government tend to result in preferential treatment for companies, but their performance is often lower compared to unconnected firms.

In the development of SOEs, the government has aimed to utilize autonomous agencies to manage these entities. This involves encouraging SOEs to align with policy goals while also instilling confidence in their ability to operate autonomously (Apriliyanti & Kristiansen, 2019). The relationship between the state and SOE management is often established through the position of a minister, which can create a distinct behavioural pattern from that of private firms. However, it has been challenging to effectively communicate policy priorities within SOEs, particularly when it comes to achieving autonomy. Some governments have tried to improve the relationship between SOEs and the state by establishing specific agreements or contracts between ministers and administrators. While this approach does not address the fundamental issue between managers and ministers, it can be a crucial step in strengthening their connection and improving overall performance (Vernon, 1984).

Political pressure on corporate decision-making can result in inefficiencies and have a negative impact on a company's success. This is because decisions may be influenced by political interests rather than solely based on business considerations, leading to suboptimal decisions that may not be in the best interest of the company or its shareholders. It is crucial for companies to establish strong corporate governance structures to mitigate the risks of political interference and ensure that decisions are based on objective criteria. Governments should ensure that their involvement in SOEs is based on sound economic and strategic reasons and not influenced by political considerations. Studies have shown that political pressure can have a detrimental effect on SOE performance, leading to decisions that prioritize political and personal goals over maximizing shareholder wealth and overall company performance (Kuzman et al., 2018; Tihanyi et al., 2019). Based on this discussion, following hypothesis are proposed.

H11a: Government intervention is playing moderating role between human capital and SOEs financial performance.

H11b: Government intervention is playing moderating role between human capital and SOEs non-financial performance.

H12a: Government intervention is playing moderating role between customer capitals and SOEs financial performance.

H12b: Government intervention is playing moderating role between customer and SOEs non-financial performance.

H13a: Government intervention is playing moderating role between structural capitals and SOEs financial performance.

H13b: Government intervention is playing moderating role between structural capitals and SOEs non-financial performance.

H14a: Government intervention is playing moderating role between innovations capability and SOEs financial performance.

H14b: Government intervention is playing moderating role between innovations capability and SOEs non-financial performance.

H15a: Government intervention is playing moderating role between ID and SOEs financial performance.

H15b: Government intervention is playing moderating role between independent directors and SOEs non-financial performance.

H16a: Government intervention is playing moderating role between management board size and SOEs financial performance.

H16b: Government intervention is playing moderating role between management

board size and SOEs non-financial performance.

H17a: Government intervention is playing moderating role between management board meetings and SOEs financial performance.

H17b: Government intervention is playing moderating role between management board meetings and SOEs non-financial performance.

H18a: Government intervention is playing moderating role between gender diversity and SOEs financial performance.

H18b: Government intervention is playing moderating role between gender diversity and SOEs non-financial performance.

H19a: Government intervention is playing moderating role between independent of committee and SOEs financial performance.

H19b: Government intervention is playing moderating role between independent of committee and SOEs non-financial performance.

H20a: Government intervention is playing moderating role between audit committee meetings and SOEs financial performance.

H20b: Government intervention is playing moderating role between audit committee meetings and SOEs non- financial performance.

2.10 Summary

This chapter provides an overview of the literature used to establish the conceptual framework for evaluating the factors that impact the performance of state-owned enterprises (SOEFP) and state-owned enterprises' non-financial performance (SOENFP). The framework proposes that various factors related to intellectual capital (INC), including human capital (Chen et al.), customer capital, social capital (SC), and CG, including independent directors (ID), management board size (MBS), management board meeting

(MBM), independent committees, and audit committee monitoring (ACM), may significantly influence SOEFP and SOENFP. Additionally, the moderating role of GI in the relationships proposed in this study framework is also suggested. The establishment of the conceptual framework to be tested is also presented in this chapter.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the approach to conducting the research study is explained. This includes the research philosophy, which outlines the researcher's beliefs about knowledge and reality, the research design, which details how the study will be conducted, and the sampling technique used to select participants for the study. Additionally, the chapter describes how the variables of interest will be measured, the approach to collecting data, the population of interest, and the sample that was obtained. The final section of the chapter summarizes the main points covered.

3.2 Research Philosophy

Philosophy describes the methods of collection of data, data analysing techniques, and elucidation of the results. Therefore the researchers of social sciences give importance to the philosophy of research because it provides a reliable and valid way in completing the research. The famous researchers. Burrell and Morgan (2017) described social phenomena through three philosophical assumptions such as epistemology, ontology, and methodology.

Research models can be expressed as “a set of logically associated propositions, ideas, or assumptions that orientate research and thinking” (Bogdan & Biklen, 1998). The selection of a model takes place before research as it offers a particular sight of the world, the study and the manner in which the research may discover the world (Grover & Niederman, 2021). However, research varies in manner of explaining

model factors, it is beneficial to assume a model comprising of three elements: methodology, ontology, and epistemology. Reflection of these elements is the main aspect of any research of Social science as they offer form and meaning to an investigation (Jaksic et al., 2021).

3.2.1 Ontology

Ontology is a philosophical term that refers to the study of being, and it is an essential component of research philosophy. In the context of research, ontology raises fundamental questions about the nature of existence and reality in the world. Researchers who take an ontological perspective must grapple with issues such as the nature of human beings, the nature of reality, and the relationship between the two.

As Lincoln (2005) notes, ontological questions are central to research because they determine how researchers view the phenomena they are studying. For example, if a researcher believes that human beings are rational and self-interested, they may approach their research with a different set of assumptions and expectations than if they believed that human beings are emotional and altruistic. Similarly, if a researcher believes that reality is objective and measurable, they may approach their research with a different set of assumptions and expectations than if they believed that reality is subjective and dependent on individual perception.

Therefore, researchers who take an ontological perspective must carefully consider their assumptions and beliefs about the nature of existence and reality, as these beliefs will shape the way they approach their research and interpret their findings. By doing so, they can

develop a more comprehensive understanding of the phenomena they are studying and the implications of their research for the wider world.

The most vital question engrossed by Ontology is “whether it is developed from human thinking or whether reality is free from human perception and knowledge”. Constructed on this impression, Bell (2018) articulated two vital ontological methods: the first one is, objectivism, which differentiates reality from human ideas and perceptions that claims reality is an arrangement of ideas and actions of Social artists. This study takes the viewpoint of an objectivist by reflecting the Social procedures under study to be distinct of Social artists.

3.2.2 Epistemology

Epistemology is well-defined as ‘a means of comprehending and telling how a person knows what he knows (Crotty, 2020). While, ontology explicates the type of knowledge, whereas, epistemology, provides insight into how this knowledge is established. Two key approaches of epistemology are ‘Social constructionism’ and ‘positivism’, however more procedures i.e., partaking research, pragmatism, and realism have been created recently.

3.2.2.1 Positivism

Positivism roots from empiricist philosophies, rationalist and is mostly regarded as the ‘scientific method’ (Creswell & Creswell, 2017). It predicts the world as a collection of natural entities that can be appropriately perceived and estimated. Here, the research purpose is sometimes to explain cause and effect link. Hence, positivism is relevant to the ontology of objectivist. As a consequence, a positivist academic does not reflect the self as

an important factor in the research; however, they can still use means and techniques to find out the reality to make it known (Cohen et al., 2002).

The implication of positivism on Social research derives from the perception that it can be researched in the same way as the real world with delivery of causal description (Martens, 2005). Thus, the aim of a positivist academic is to describe and evaluate the causes that impact the outcomes. The focus is on recognizing and functioning of variables that estimate significant Social processes and testing the links between them. Positivism proposes that these associations are controlling and causal, can be identified and validated by suitable arithmetic analysis methods (Creswell & Creswell, 2017; Scotland, 2012).

Positivism is believed to be reductionist as it tries to decrease widespread perceptions into minor, measurable subjects to create research hypotheses and questions (Martens, 2005). An approach of positivist also focuses the significance of theories that explain the world and thus, can be estimated and then either validated or distinguished to assist in comprehending the world. In this view, positivism depends strongly on deductive reasoning whereas theories are established, measured, and distinguished to develop generalization (Saunders et al., 2009). Academics working on positivist epistemology concentrates on consequences of theory by testing deduced hypotheses (Bell, 2018). Methods of deductive reasoning work within rules that need the open explanation of factors and links between them and the segregation of the research subjects from the scholars (Ghauri et al., 2020). Quantitative information is advantaged status, and large tests are significant for simplifying conclusions of study onto populations that are large (Bell, 2018).

3.2.2.2 Social Constructionism

Social Constructionism is an approach of epistemology that reflects that humans construct, interpret, and experience the world when they interact with broader systems of society and other humans (Maxwell, 2012). Consequently, approaches of Social Constructionism try to comprehend the ‘world of individual experience’ (Cohen et al., 2002). Such comprehension has priority over generalization of positivist of the results of findings over greater populations (Martens, 2005). Comprehension of the process in question is unavoidably linked to the views of the participants in the situation under study (Creswell & Creswell, 2017; Molina-Azorin & Feters, 2022).

Hence, Social constructionism is not just about examining participants of the study, but also involving with them to bring in-depth insights into the situations. Due to this, theory is related less to the Social constructionism; instead, it sometimes seeks to create theories from actual experiences. Social Constructionism pays more attention on tools such as first-hand interpretations and experiences to comprehend the world instead of examining the human behavior laws (Bell, 2018).

As compared to Positivism, the Social constructionism strongly depends upon inductive reasoning. This form of reasoning ‘includes the deduction that an example or repetitive collection of events may be widely generalized’ (Malhotra & Birks, 2007). It focuses on the inquiry of the association between meanings and actions of human beings (Bell, 2018).

This involves in-depth comprehension of research setting in which study is conducted and acknowledgement of the researcher as an element of the process of the research (Guba & Lincoln, 1994). Therefore, scholars that imply inductive reasoning give importance to the

qualitative information and imply more practical structures of the research so that the variations can be applied as the research advances (Barsoum, 2022).

In this research, positivist approach is opted to complete the research. This approach supports quantitative research where the survey methodology is used to test the theoretical relationships. By considering the positivist approach researcher focuses on the reality of the phenomenon that is being discovered (Martens, 2005). In the context of research, the objectivist viewpoint refers to the belief that there is an objective reality that can be studied and understood through systematic observation and analysis. Epistemological assumptions are the beliefs and theories about how knowledge is acquired and what constitutes valid knowledge.

When researchers adopt an objectivist viewpoint and specific epistemological assumptions, they aim to comprehend and interpret the phenomena they are studying by seeking to understand and absorb the existing theories and knowledge related to the phenomena. This involves gathering data through empirical methods and using scientific reasoning and analysis to identify patterns and relationships in the data (Molina-Azorin & Feters, 2022).

In an objectivist approach, researchers measure the relationship between variables in a quantitative manner. This involves identifying regularities and patterns in the data through statistical and systematic methods. The empirical evidence that is gathered is then analysed to develop a general law that can explain and predict the phenomena being studied. This approach assumes that knowledge is objective and that phenomena are factual and free from biases or prejudices. By studying the promptness of the phenomena, researchers can determine if the theoretical statements of causal relationships are true or not.

Lastly, through objectivist's view and methodological assumption, the researcher measure the association among variables quantitatively based on regularities and pattern statistically and systematically. In the objectivist view, empirical evidence gathered through quantitative methods is seen as reliable and objective. The researcher aims to identify regularities and patterns in the data, and use statistical analysis to measure the association among variables. The results obtained from the study are considered as general laws that can be applied to explain and predict the phenomena being investigated. This approach values objectivity, reliability, and replicability in research (Bell, 2018).

An objectivist viewpoint was adopted, which assumes that knowledge already exists and is objective. Therefore, the research aimed to assess the performance of SOEs based on three factors: independence, corporate governance, and government intervention. The researcher adopted a quantitative research design to study the phenomenon objectively and measure the relationship among the variables statistically and systematically based on regularities and patterns. The research hypotheses were developed to test the performance of SOEs based on INC, CG, and GI, which allowed for comparisons with existing studies in terms of similarities, differences, strengths, and limitations. The chosen research design facilitated the collection of numerical data that could be analyzed statistically to answer the research questions and achieve the objectives of the study.

3.3 Research Design

George and Bennett (2005) expresses design of a research as the fundamental strategy or plot of the study, and the rationale behind it, The study design must tell how the sample is taken, which sub-groups the sample must have, what similarities can be made, if there is

a need for control groups, which factors are required to be estimated (at which intervals and when) and how such estimates will be relevant to outside scenarios. Research designs are categorized into: (i) experimental (quasi- experimental and classic) and (ii) non-experimental (Comparative, cross-sectional, longitudinal and case study).

The former depends on experiments and methods of research that are quantitative; while, the latter was created for study in the Social contexts and consists of both quantitative/qualitative methods of research (Maylor et al., 2016; Myers, 2019). It is suitable to use quantitative scale for successfully reporting the research hypotheses and questions. This method is chosen as after monitoring the literature, it has been observed that most of the research in the context of CG, INC and the performance of state owned institution used quantitative method (Ogbonnaya & Valizade, 2018). Also, the quantitative method used the deductive approach to test the theory shaped by positivist philosophy and when you have clear pre-defined research questions to answer (Bryman, 2016). Therefore, a cross-sectional correlational survey design is most appropriate for this research.

3.4 Operationalization and Measurement of variables

Role of the measurement scale is very crucial for developing a survey form. Therefore, choosing the right scale is important for every researcher. In this research, the 'HC', 'CC', 'SC', 'IC', 'ID', 'managing board size' 'GD' 'ACM' 'IOC' and 'MBM' constitute the predictors of the study, while the predicted factor is 'SOEs performance'. The study employed several measurements to quantify the variables of interest, including the predictor variables (INC, and CG), the predicted variables (SOEFP and SOENFP), and the moderating variables (GI). These measurements are presented in Table 3.2, and were used to test the research hypotheses and analyze the data. The subsequent section provides a

detailed description of these measurements and their sources. Furthermore, the most of measurement scale of the study are measured on a 5-point Likert scale such as “1= strongly disagree to 5= strongly agree”. However the variable such as ACM and ID are measures on 5 -point Likert scale ranging from (1= never to 5= very frequently) respectively.

3.4.1 Intellectual Capital

Intellectual capital (INC) is “a term used to refer to a collection of knowledge assets that are owned or controlled by an organization and play a significant role in creating value for the organization's key stakeholders” (Bontis, 2001a). Alipour, (2012) defined INC as the wealth of ideas and the ability to innovate, while Guthrie et al. (2012) suggested that INC is often used interchangeably with intangible assets.

There are varying opinions among scholars about the components of INC, with some suggesting different numbers of components. However, the researcher agrees with certain scholars who have classified INC into four components: HC, SC, CC, and IC. These components represent different aspects of INC, such as human capital, structural capital, customer capital, and innovation capability (Clarke et al., 2011; Dalwai & Salehi, 2021; Galabova & Ahonen, 2011b; Ngah & Ibrahim, 2009; Sharabati et al., 2010a). Experts in the field of INC divided INC into four dimensions: (1) HC, (2) SC, and (3) CC (4) IC.

3.4.1.1 Human Capital

This is defined as “HC is the intangible assets owned by the firm in the form of intellectual ability, creativity and innovation that are owned by its employees”. The researcher has included items that reflect the concept of human capital, such as learning and education,

experience and expertise, and creativity. To measure HC, 24-items scale by Sharabati et al. (2010a) has been adapted.

3.4.1.2 Customer Capital

This is defined as, CC is defined as “CC is the ability of the organization relationship with the other party to maintain the sustainability of the firm, also known as relationship capital”. The questionnaire has adapted all items that indicate CC namely strategic alliances, licensing and agreements and customer knowledge. To measure CC, 12-items scale by Sharabati et al. (2010a) has been adapted.

3.4.1.3 Structural Capital

This is defined as, SC is defined as “SC encompasses the firm's ability to reach out to the market, or hardware, software, and others supporting the firm”. The questionnaire has adapted all items that indicate SC namely Systems and programs. To measure SC, 10-items scale by Sharabati et al. (2010a) has been adapted.

3.4.1.4 Innovation Capability

For this research IC is defined as “IC as the development of new products and/or new processes introduced to the market”. Schumpeter (1934) defined innovation as “carrying out of new combinations” that include “the introduction of new goods, ... new methods of production, ... the opening of new markets, ... the conquest of new sources of supply ... and the carrying out of a new organization of any industry”. The questionnaire has adapted all items that indicate IC namely Systems and programs. To measure IC, 12-items scale by (Wang and Ahmed., 2004) has been adapted.

3.4.2 Corporate Governance

This research used the scale of Khanchel (2007) for measuring the corporate governance.

The CG is comprised of the following dimensions and these have been used in this research.

- ID
- MBS
- MBM
- GD
- ACM
- IOC

3.4.2.1 Independent Director

In this study, ID is defined as “Corporate governance practices dictate that an independent director is an individual who has not received any significant financial or other benefits from the company within the previous three years, such as being an employee or holding at least 10% of the company's shares”.

The questionnaire has adapted all items that indicate ID namely meeting with management both formally and informally, agenda of the meeting, discussion of members and BOD's approval and disapprovals etc. Abubakar (2016) has been adapted in this study.

3.4.2.2 Management Board Size

In this study “The BOD who oversee the daily operations of a company are typically full-time employees of the company, a related party, or a group of companies.” MBS has its significant importance in the quality and performance of the CG (Setia-Atmaja, 2008). Therefore the companies must consider appointing two or more directors for increasing the efficiency of the companies. A president director should be there to observe the

performance of the various directors working in the company. This study has adapted the measurement scale from the study of (Nawaz Khan et al., 2019).

3.4.2.3 Management Board Meetings

MBM mean “The BOD is responsible for managing the company’s business operations to achieve the set objectives. Therefore, the board members need to hold separate meetings among themselves to discuss matters related to strategy, evaluation, and other relevant issues.”. The article of association enterprise by board should identify, “This refers to the regularity of BOD meetings, the process for scheduling and conducting such meetings, and the protocol for making decisions during BOD meetings”.

The frequency of the meeting varies from organization to organization. It depends upon the nature of circumstances that occurred in organizations (IFC, 2014). To progress the organizational performance, the literature suggests that the frequency of meetings should be increased so that the problems and opportunities can be discussed and analysed in a timely. Along with this, it is also suggested that the supervision of the meeting should be increased so that the productive work can be increased (Shivdasani & Zenner, 2004). The questionnaire has adapted all items that indicate MBM from the study of (Nawaz Khan et al., 2019).

3.4.2.4 Gender Diversity

Although GD is a broader and it deals with how different gender are represented in a relevant setting Sytsma (2006)s, however, in the context of CG, “studies have utilized GD to exhibit women representation on the board”.

The questionnaire has adapted all items that indicate GD namely all stakeholders have been involved in the appointment of the Board, the board has been composed of both genders that can be measure, 6-items scale by Honghui (2017) has been adapted.

3.4.2.5 Independence of committees

Usually, such committees are formulates on the suggestion of Board of Commissioners may for carrying the enterprises functions. In Pakistan SOEs' are established by the suggestions of Pakistan CG Code (2017) is the "In order to support the BOD in fulfilling its responsibilities, SOEs often establish committees such as the IOC, committee of risk policy, committee of good governance, committee of remuneration and nomination committee. To satisfy the requirement of IOC, each committee should comprise of at least one member from the Board who meets the specified criteria. Additionally, committees may hire external professionals with relevant expertise to support their work."

The questionnaire has adapted all items that indicate IOC namely the number of members, board effectiveness, and existence of committees. The measurement scale of IOC is adopted from the research of Abubakar (2016).

3.4.2.6 Audit committee meeting

Frequent meeting are arranged to increase the efficiency and effectiveness of SOEs' by the ACM (Azam et al., 2010). ACM means "company to avoid enforcement actions by the capital market regulator and the SECP enforcement actions".

The questionnaire has adapted all items that indicate meetings with external and internal auditor, attendance of the members and audit process. This study adopted the scale from the work of (Abubakar, 2016).

3.4.3 Government Intervention

The government intervention construct was adapted from (Abubakar, 2016). The original government construct included Political pressure and regulation and monitoring was measured on a categorical scale consisting of 11 items. To ensure the questionnaire's relevance and parsimony to the study's context, a panel of experts consisting of three academicians and three professionals from government-owned enterprises was consulted. Based on their suggestions, the government scale was measured using a Likert scale to gauge the tendency towards intervention. Zikmund and Babin (2010) recommend the use of an interval scale for research instruments, as it allows for powerful statistical calculations such as standard deviation and variance. They suggest that using scales of higher order can yield more precise and accurate results, and thus encourage their use in behavioural research. Based on these recommendations, the researcher selected an interval scale for the study. Various studies also have measured the government intervention on the Likert scale (Alhnaity et al., 2018; Gao, 2011; Joo et al., 2018). All measurement items were scored on five-point Likert-type scales measuring the degree of tendency with item descriptions, ranging from 1 (never) to 5 (very frequently). Moreover, the adapted scale is too long to handle along with the other variables of the study. As a result, the study identified and adapted 6 out of the 11 items for the government scale. Examples of items used in the adapted scale include: "There is a strong correlation between politics and management's role in budget proposals".

The securities exchange commission of Pakistan (hereafter SECP) is responsible for assessing the Pakistan government in the formulation and implanting of the policies. It also monitors the performance of SOEs of Pakistan. Like other countries, Pakistanis SOEs are responsible for: (1) maintenance of the quality of various goods and services in the

domestic market; (2) to enhance the national income of the country (3) to enhance the developments of the national economy. Therefore, the SOEs are the main assets of any country and their purpose is to serve the nation with quality products at affordable prices but it has been observed that SOEs of the developing countries are suffering due to political interferences. Every political government just focuses on their political interest and keeping the interest of the nation aside. Hence the monitoring of the governance is needed highly.

To measure the GI, a holistic approach has been taken in this study comprises of political pressure and regulation & monitoring. Therefore the items of political pressure was measured by 6-items scale by (Abubakar, 2016).

3.4.4 SOEs Performance

Firm performance is outlined as “performance of the organization in terms of market share growth, FP and customer loyalty that can be achieved with the help of good governance and intellects by the SOEs”. The questionnaire has 6 items scale for financial performance adapted from (Wang et al. (2018). While the measurement of non-financial performance 05 items was adopted from the study of (Wang et al. (2018).

Table 3.1

Summary of measurement

Construct	Items	Source
Human Capital	24	Sharabati et al. (2010b)
Customer Capital	12	Sharabati et al. (2010b)
Structural Capital	09	Sharabati et al. (2010b)
Innovation Capability	11	Wang and Ahmed (2004)

Independent Director	07	Abubakar (2016)
Board Size	05	Nawaz Khan et al. (2019)
Board Meeting	05	Nawaz Khan et al. (2019)
Gender Diversity	06	NUHU (2017)
Independence of committee	03	Abubakar (2016)
Audit Committee meeting	04	Abubakar (2016)
Government Intervention	06	Abubakar (2016)
Financial Performance	06	Wang et al. (2018)
Non-Financial Performance	05	Wang et al. (2018)

“Own illustration”

3.5 Sampling process

The sampling process defining the population, determining the sample size, selecting the sampling technique, identifying and selecting participants, and collecting data from the selected participants.

The first step is to define the population of interest, which in this case is the top management of SOEs in Pakistan. The second step is to determine the appropriate sample size. In this study, the sample size is determined based on the purposive sampling method, which selects participants based on specific characteristics or traits that are relevant to the research objectives (Etikan et al., 2016; Kyal et al., 2022; Rabiee, 2004).

The third step is to select the sampling technique, which in this study is purposive sampling due to the unavailability of a sampling frame during the COVID-19 pandemic. The fourth

step is to identify and select participants who meet the specific criteria or characteristics for the study.

Finally, the last step is to collect data from the selected participants by using survey firms through post office. Once the data is collected, it is subjected to analysis and interpretation to draw meaningful conclusions in accordance with the research objectives.

3.5.1 Population:

Downe-Wamboldt (1992) defines the population as the complete group of individuals who meet a specific set of criteria and are of interest to the researcher. The results of the research can be generalized to this entire group. Van Teijlingen et al. (2001) define a sample as a subgroup of population that is picked for a study and is representative of the population. In the current research, the target population is the management-level employees of state-owned enterprises in Pakistan. Collecting data from top management can be a practical approach when other members of the organization are difficult to access due to unforeseen circumstances such as the COVID-19 pandemic. In such cases, top management can provide a representative perspective on behalf of the entire organization since they are responsible for making critical decisions and overseeing the overall performance of the organization. In this study, top management refers to directors, CEOs, CFOs, and secretaries of firms, as described in various studies (Lei et al., 2019).

While it is true that top management's views may not always be representative of the entire organization, they still play a critical role in decision-making and shaping the overall direction of the organization. As such, gathering data from top management can still provide valuable insights into the organization's performance and effectiveness. However,

it is important to supplement this data with information from other stakeholders to gain a more complete picture of the organization. By using a combination of data sources, researchers can better understand the complexities of the organization and make more informed recommendations for improvement. Collecting data from top management of SOEs has been a common practice in research studies, as they provide a representative perspective on behalf of the entire organization. However, it is crucial to consider that their views may not always reflect those of the entire organization.

Despite this limitation, researchers have used top management as a representative sample in many studies, including the one conducted by (Abubakar, 2016) on the relationship between CG and SOEs performance, and the study by Lei et al. (2019) on monitoring power and CEO pay-performance sensitivity in Chinese state-owned listed firms. Therefore, although collecting data from top management of SOEs can be a valid approach, it is essential to acknowledge its limitations and potential biases.

3.5.2 Sampling Procedure

The Researchers widely agree that sampling is a crucial aspect of research methodology, as it is necessary for drawing general conclusions from a study. Sampling involves the selection of a subset of the population of interest, which is representative of the entire population (Brink et al., 2006). The crucial aspect of sampling in research is to generate results that instill trust in both the intended audience and the wider public (Miles & Huberman, 1994).

Two primary categories of sampling techniques are probability sampling and non-probability sampling methods (Bryman, 2016; Neuman & Guggenheim, 2011). In

probability sampling, the probability of selecting each participant is known, while the probability of selection is not known in non-probability sampling (Vehovar et al., 2016). Sampling techniques are broadly classified into probability and non-probability methods. Probability sampling methods involve selecting samples from a larger population in a way that gives every unit in the population a known and equal chance of being selected (stratified, systematic sampling, simple random and cluster). On the other hand, non-probability sampling methods do not involve random selection and are more subjective in nature (judgment, quota, convenience and snowball sampling). Probability sampling is advantageous because the sampling error can be calculated, which is the degree of difference between the sample and the population. Results are reported with an estimated sampling error when generalizing to the population. In contrast, the degree of difference between the sample and population is unknown in non-probability sampling (Vehovar et al., 2016).

Acharya et al. (2013) explain that in non-probability sampling, the selection of members from the population is not done randomly. The process involves choosing a subset of the population to represent the entire population based on existing knowledge of the population. Purposive sampling, as defined by Vehovar et al. (2016), involves the deliberate selection of individuals by the researcher based on specific criteria related to the topic of interest. The individuals selected possess relevant information about the phenomenon under investigation, and the researcher has sufficient knowledge of this information. Leedy and Ormrod (2005) explain that purposive or judgmental sampling is appropriate when the researcher selects individuals or objects that are likely to provide the most valuable information about the topic being studied.

The current study utilized purposive/judgment sampling as the researcher believed it would lead to a more representative sample. The researcher's assumption was that the selected SOE representatives would be similar enough to allow for generalization or transferability of findings. This required the researcher to make a critical judgement about the minimum amount of variability and maximum level of similarity among the selected participants (Campbell et al., 2020; Etikan et al., 2016). Purposive sampling is a sampling technique that is commonly utilized when the researcher aims to study a specific group of individuals possessing certain characteristics that are pertinent to the research objectives. The selection of participants is based on their ability to provide relevant information and insights that can address the research questions effectively. This sampling method is particularly advantageous when the population is not readily accessible, or when the sample size is small.

Purposive sampling was used as a practical approach to overcome the limitations imposed by the COVID-19 pandemic, which restricted access to a comprehensive list of top management of SOEs in Pakistan. This allowed the researchers to identify and select participants based on specific characteristics or traits relevant to their research objectives, such as their position as top management in SOEs. By using this sampling method, the researchers were able to collect valuable data and insights that helped them answer their research questions despite the challenges posed by the pandemic.

This study used a purposive sampling technique for conducting a survey. The survey procedure was conducted in two phases. In the first phase, all SOEs of the country (as explained in table 3.3) forming the study's sampling frame were contacted by sending the survey forms via the Pakistan post service. A cover letter (see Appendix I) was attached to

the questionnaire that informs the SOEs about the importance of the survey as well as assures them about the privacy of the collected information. For the purposes of incorporating the involvement of the desired unit of analysis, it was also clearly specified in the attached cover letter that SOEs must involve top-level managers to participate in the study and to fill out the questionnaire who have comprehensive knowledge of the SOE's operations. However, the response rate obtained from this phase was insufficient, as the list contain only 212 SOEs which was insufficient for the study's requirement. Keeping this in view, in the second phase, the researcher made a call to the contact numbers of the SOE's offices and requested them to fill out the survey forms and 202 SOEs agree to fill out the survey forms. Out of the total questionnaires distributed, 188 were returned with a response rate of 93%. Moreover, in terms of response rate, Baruch and Holtom (2008) reported that in business and management research the response rate could be above 50%. Based on those arguments, 93% of the obtained response rate was found enough for the current study's purpose

The study utilizes a survey design with a sampling technique to collect data that is representative of the population. Survey research typically involves using smaller groups to make inferences about larger groups with the aim of collecting data that is representative of the population (Hennink & Kaiser, 2022). The table below (Table 3.2) provides details of the state-owned enterprises (SOEs) operating in Pakistan and their breakdown.

TABLE 3. 2

Total Population Sector wise

No	Classification	Population N
1.	Energy	41
2.	Financial	33
3.	Industrial and Engineering	20
4.	Promotional and Advocacy	46

5.	Services	26
6.	Trading	05
7.	Transportation	35
8.	Miscellaneous	06
Total		212

The total number of SOEs' in Pakistan is 212 comprising of 41 energy sectors, 33 from financial sectors, 46 from promotional and advocacy and 84 other companies consist of different sectors. Most of the SOEs' are situated in the major cities of Pakistan such as Karachi, Lahore, Islamabad, Rawalpindi, Faisalabad, Gujrat and Multan. As the number of state-owned institutions are only 212, therefore, data is collected from the total population of current study. The survey forms were distributed to the respondents using the Pakistan Post Service. The addresses of the respondents were obtained from the respective SOEs' websites, and a cover letter was attached to explain who could fill out the survey form. To ensure that the data collected was relevant, legitimate, and authentic, the study targeted Directors, CEOs, CFOs, and Secretaries of SOEs for data collection.

3.5.3 Sampling Criteria

The sampling criteria are predetermined traits or characteristics that participants must possess to be eligible for inclusion in a study. Researchers select these criteria based on their research objectives and use them to identify individuals who can provide relevant information to answer research questions. Only participants who meet the criteria are included, while those who do not are excluded. The sampling criteria are typically listed in the study methodology and serve to ensure that the sample accurately represents the population of interest.

The criteria for sampling in this study were established based on various factors, including the research problem, purpose, design, and definitions of the study variables. These criteria

were developed to ensure that participants possessed specific traits or characteristics that would enable them to provide relevant information to address the research questions. Examples of such characteristics may include language proficiency, age, and communication skills. These sampling criteria were listed in the study methodology to ensure that the sample was representative of the population being (Polit & Beck, 2010).

3.5.3.1 Inclusion Criteria

Inclusion criteria are the specific qualities or characteristics that individuals must have to be eligible for inclusion in a research study or sample population. As explained by Polit and Beck (2010), inclusion criteria are used to determine whether an individual is suitable for membership in a particular population or sample.

The researcher used purposive sampling to select participants for this study based on their experience, expertise, and the roles they held in their respective organizations. Therefore, the following individuals were considered eligible for participation in the study:

- Government officials such as CEO of SOE
- CFO of SOEs
- Directors
- Secretaries of SOEs

As previously mentioned, the survey forms were distributed to the respondents via mail using the address information available on the websites of the SOEs in Pakistan, through the Pakistan Post service.

3.5.3.2 Exclusion Criteria

Exclusion criteria refers to the specific characteristics that participants must not possess in order to be included in a study. It is determined by the researcher based on the research objectives and is used to exclude individuals who do not meet the necessary criteria. In this study, the following factors were considered for exclusion of respondents:

- Non-governmental officials
- Board members and executives not employed by SOEs.

3.5.4 Sample Size

The sample size refers to the number of study participants in a sample (Polit & Beck, 2010). Several researchers have discussed the suitable sample size for performing structural equation modelling (SEM). However, Ding et al. (1995) revised many studies of SEM and resulted in the least acceptable sample of 100 to 150 participants for this kind of research. Various formulas and methods have been described by the researchers for explaining the sample size. Some researchers such as Further, Stevens (2012) suggested that 15 cases per factor are enough for the multiple regressions and some have suggested that 5 cases per parameter are enough for multiple regression when there are no missing value and normality cases. Since PLS-SEM is like multiple regression, therefore the researchers say that 15 cases per factor are reasonable.

Referring to Yamane (1973), he has provided a table for determining the sample size based on the population. According to information obtained, the total number of SOES are 212. Therefore, based on Yamane (1973) suggested a simple formula such as “ $n = N / (1 + N \cdot e^2)$ ” for calculating the required sample size. In this research, the total population was 212 therefore the researcher followed the formula and found 66.33 sample size by following the formula such as $66.33 = (212 / (1 + 212 \cdot 0.1^2))$ and found the sample size

sufficient for this research. For this calculation of the sample size, the researcher used a 90% confidence interval and there were only 212 SOEs and data was being collected from the top managers of the companies. Instead of using 66 samples, the researcher has chosen to use 202 samples to get more confident and accurate result. The details of the SOEs sector-wise are given in table 3.2.

3.5.5 Execute the Sample Process/Response Rate

In this research, data was collected form the top management of SOEs of Pakistan. For this purpose 202 survey forms were distributes and 188 valid survey forms returned. Hence the response rate was recorded at 93%. As per the directions of Hair et al. (2010), a 50% of response rate is considered acceptable.

Table 3.3
Response from Respondents

Response	Frequency
Distributed Questionnaire	202
Returned Questionnaire	188
Response rate	93%

3.5.6 Control for Measurement Error

Measurement error is a common issue that can affect the accuracy and reliability of measurement instruments. Measurement error is a term used to describe the degree to which the measured values of a variable deviate from the true values of the underlying construct being measured. It can arise from a variety of factors, including data entry errors, inadequate definition or operationalization of constructs, and discrepancies between self-reported attitudes or behaviours and actual ones. According to Hair et al. (2010),

measurement error can be a significant source of bias in research studies and must be carefully accounted for to ensure the accuracy and validity of study results.

To minimize measurement error in this study, the researchers took several measures. First, they used interval scales for the items, which are more precise than ordinal or nominal scales, and can reduce measurement error. Second, they conducted various validity and reliability tests for both the pilot study and the main study, including face and content validity, convergent and discriminant validity, and tests of reliability such as Cronbach's alpha. These tests can help ensure that the measures being used are valid and reliable, and can reduce measurement error.

Finally, the use of structural equation modelling (SEM) in the study also takes into account measurement error in estimating the relationships among the various constructs. SEM is a statistical technique that allows researchers to examine complex relationships among variables, while taking into account measurement error and other sources of variance (Hair et al., 2010). By using SEM, the researchers can obtain more accurate estimates of the relationships among the constructs, which can help increase the validity and reliability of the study.

Variance-based structural equation modeling (SEM) is a statistical method that is used to analyze the relationships between variables, while taking into account measurement errors and other sources of variance. This method is often used in social science research to examine complex relationships among variables, and to test theoretical models.

In this study, the researchers used Smart PLS 4.0 software to conduct variance-based SEM, which allowed them to analyze the relationships among the different constructs and variables, while taking into account measurement error and other sources of variance. By using this approach, the researchers could obtain more accurate estimates of the relationships among the constructs, and ensure that measurement errors were minimized and duly accounted for.

Overall, the use of variance-based SEM in this study was a rigorous and effective method for analyzing the data, and for testing the hypotheses and theoretical models under investigation.

3.6 Data Analysis Strategy

For analysis, a combination of descriptive and inferential statistics was utilized for the analysis of the collected data. In this research, descriptive statistics were used to summarize and describe the data in terms of its central tendency and variability, and to provide an overview of the study sample and variables under investigation. This was done using SPSS 25 software, which is commonly used for descriptive statistics analysis in social science research.

In contrast, inferential analysis was conducted using SEM to make predictions about the relationships among the variables, and to test the study hypotheses and theoretical models. SEM is a powerful statistical method that allows for the modelling of complex relationships among variables, while taking into account measurement errors and other sources of variance. It is often used in social science research to test theoretical models and to explore the underlying structures of complex phenomena.

The researchers used variance-based SEM through Smart PLS 4.0 software to conduct the inferential analysis. This software is known for its strengths in analysing different types of measures and for its ability to model complex relationships without making assumptions about the data. The use of SEM in this study was a rigorous and effective method for analysing the data, and for testing the study hypotheses and theoretical models.

3.6.1 Structural Equation Modelling (SEM)

SEM is a statistical modelling technique that is used to test and validate complex theoretical models. It allows researchers to investigate the interrelationships between latent variables (unobserved variables) and observed variables, and to evaluate the goodness of fit of the proposed model. SEM is typically used in the social sciences, but it is also applied in many other fields, such as finance, engineering, and ecology (Hair et al., 2010; Schumacker & Lomax, 2004). The use of SEM enables researchers to test complex hypotheses and to understand the underlying mechanisms that drive observed phenomena. By providing a quantitative test of a theoretical model, SEM allows researchers to make causal inferences and to better understand the nature of the relationships between variables (Schumacker & Lomax, 2004).

SEM is a confirmatory technique as it is used to test a pre-specified theoretical model. Researchers start with a hypothesized model and then collect data to test if the model fits the data. Confirmatory factor analysis (CFA), hypothesis testing, linear regression, variance, and covariance estimation are some of the other kinds of investigations that SEM can be used for (Jöreskog & Sörbom, 1996).

In SEM, each construct is measured by observed variables, and the model seeks to depict the relationships among the observed variables. The model also measures the unidimensionality of each construct, as well as their reliability and validity. The overall goal of SEM is to provide a quantitative test of the theoretical model hypothesized by the researcher (Hair Jr et al., 2020; Kline, 2015).

Covariance-based SEM (CBSEM) is based on the assumption that the observed variables are measured without error, and that the relationships between the observed variables and latent constructs are represented by the covariance matrix. CBSEM is used when the research goal is to estimate the magnitudes of the relationships between the constructs in the model, and to test the statistical significance of these relationships.

Variance-based SEM (VBSEM), on the other hand, is used when the observed variables are believed to be measured with error, and when the researcher wants to examine the extent to which the model accounts for the variance in the observed variables. VBSEM is also known as PLS-SEM, and it is based on the estimation of latent variables applying partial least squares regression. VBSEM is useful when the sample size is small, the data is non-normal or skewed, or when the researcher is interested in predicting outcomes.

Both CBSEM and VBSEM have their own strengths and weaknesses, and the choice of which approach to use depends on the research question and the nature of the data (Chin, 1998). In this study, the researcher chose to use VBSEM through Smart PLS 4.0 software to account for measurement errors and to model complex relationships between the constructs in the study.

CBSEM is mainly focused on estimating the covariance matrix among the observed variables and then fitting the model to the data (Dijkstra, 1983). It is based on the maximum likelihood estimation method and is suitable for large sample sizes. On the other hand, PLS-SEM focuses on estimating the variance explained by each of the latent variables in the model and then fitting the model to the data (Reinartz et al., 2009). It is based on the partial least squares algorithm and is suitable for smaller sample sizes and more complex models. PLS-SEM also allows for the inclusion of both reflective and formative measurement models, whereas CBSEM only allows for reflective measurement models (Barclay et al., 1995; Hair Jr et al., 2017).

Using a path diagram is a common way to visually represent the relationships among variables in SEM. The path diagram shows the hypothesized causal relationships between latent constructs and observed variables, as well as the strength and direction of the relationships. It can also show the measurement model, which specifies how the observed variables are related to their corresponding latent constructs. In PLS-SEM, the path diagram displays the measurement and structural models through the outer and inner models, respectively (Hair et al., 2019). The outer model defines the connections between the observed variables and their corresponding latent constructs, whereas the inner model defines the relationships among the latent constructs (Chin, 1998).

The path diagram can be used to evaluate the overall model fit and to examine specific hypotheses about the relationships among the variables. The two-stage approach in SEM, also known as the "confirmatory factor analysis" approach, is widely used in marketing research as it allows researchers to establish the measurement model before examining the structural model (Hair Jr et al., 2010). In the first stage, the measurement model is

established by evaluating reliability and the validity of constructs and their indicators through techniques such as factor loadings, convergent and discriminant validity, and composite reliability. Once the validity and reliability of the measurement model is established, the researcher can proceed to the second stage, which involves testing the structural model by examining the relationships among the constructs and evaluating the hypothesized paths. This two-stage approach ensures that the measurement model is accurate and valid, which provides a solid foundation for the subsequent structural model testing and hypothesis testing.

In PLS-SEM, the focus is on measuring the overall construct, rather than measuring each individual item or indicator. This is because PLS-SEM uses a latent variable approach, where the construct is assumed to underlie the observed indicators. As a result, PLS-SEM can handle non-normal data, small sample sizes, and complex models, which makes it a popular choice for research in various fields, including marketing, information systems, and social sciences (MacCallum & Austin, 2000; Straub et al., 2004).

In PLS-SEM, convergent validity is examined through outer loadings of the indicators on their corresponding latent variables (Anderson & Gerbing, 1988). This involves checking if the loadings are statistically significant and if they are above a predetermined threshold value, typically 0.7 or 0.5. In order to assess discriminant validity, researchers typically compare the square root of the average variance extracted (AVE) for each construct with the correlations between that construct and other constructs in the model. When the AVE for a construct is higher than its correlation with other constructs, this indicates that discriminant validity has been established (Gefen & Straub, 2005).

It sounds like this study has followed a rigorous approach to SEM using PLS, including a two-stage approach for estimating the measurement and structural models, assessing convergent and discriminant validity, testing the model for goodness of fit, and estimating moderating effects. Multi-group analysis was also performed to explore potential differences across different groups. These are all important steps to ensure the validity and reliability of the SEM results.

3.6.1 Content and Face Validity

It should be noted that there is a discrepancy in the information provided as Hair et al. (2010) suggests that content validity should be assessed by a panel of experts, while Sekaran (2000); Sekaran and Bougie (2019) recommends using both experts and a pilot test with a small sample. Nonetheless, it is commendable that the researcher consulted experts to ensure the appropriateness and representativeness of the measures used in the study.

Additionally, it would be helpful to know how the feedback from the experts was incorporated into the final measures used in the study. It would also be useful to provide more information on the expertise of the experts consulted, such as their background and experience in the field.

It is come to know that the feedback provided by the experts during the pre-test stage can be crucial for the success of the study. By incorporating the experts' opinions and suggestions, the researcher can ensure that the measures are appropriate and representative of the construct under study. Additionally, the feedback can also help the researcher in improving the clarity and wording of the items, which can lead to more accurate and

reliable data. Therefore, it is important to take the expert feedback seriously and make necessary adjustments to the instrument accordingly.

Likewise, Sekaran (2000) had stated, face validity is an important aspect of questionnaire development, as it ensures that the items included in the instrument appear to measure what they are intended to measure. In order to evaluate the face validity of the instrument used in this study, the researchers showed it to ten potential respondents and asked for their feedback on various aspects such as the appropriateness of item statements and their wording, instructions, general formatting, understand ability of scales, and any possible difficulties in answering the questions due to the lack of labelling on interval scales. The feedback received from these individuals was then taken into consideration to finalize the questionnaire for the pilot test.

3.6.2 Pilot Study

The pilot study is also an opportunity for the researcher to identify any potential problems with the survey instrument, such as confusing questions, ambiguous wording, or issues with formatting (Van Teijlingen et al., 2001). This allows the researcher to make necessary adjustments before conducting the main study, which can improve the quality of the data collected and increase the reliability and validity of the findings. In this study, the pilot test was used to refine the questionnaire and ensure that the measurement items were clear, appropriate, and relevant to the constructs under investigation. The responses from the pilot test were analysed to check for internal consistency of each measure, which is a key indicator of reliability. While the recommended sample size for pilot studies is relatively small, typically ranging from 15 to 30 respondents, a larger sample size can provide

stronger results. However, the sample size for the pilot study should be sufficient to test the instrument's reliability, validity, and feasibility before administering it to the larger sample in the main study (Malhotra & Birks, 2007). Additionally, the larger sample size of 70 respondents was used for the pilot study in order to achieve a stronger overall predictability of the instrument. This allowed for a more reliable measurement of internal consistency for each of the measures being evaluated.

For reflective measures, internal consistency is important, and reliability coefficients such as Cronbach's alpha should be calculated. Cronbach's alpha is a commonly used measure of internal consistency Petter et al. (2007) that estimates the extent to which all items in a scale are measuring the same underlying construct. A higher Cronbach's alpha indicates a greater level of internal consistency among the items in the scale (Jarvis et al., 2003).

The purpose of the pilot test was to assess the reliability and validity of the instrument and to confirm that it was free from measurement errors. In order to measure the internal consistency of the reflective measures, the researchers calculated Cronbach's alpha reliability coefficients for all measures, as recommended by (Hair et al., 2019). By ensuring the validity and reliability of the instrument, the researchers can be more confident in their findings and conclusions drawn from the data collected during the main study.

3.6.3 Reliability Test

Cronbach's alpha is a measure of internal consistency, which is the degree to which the items in a scale or test are measuring the same underlying construct (Bland & Altman, 1997). Cronbach's alpha coefficient ranges from 0 to 1, with values closer to 1 indicating higher internal consistency. A commonly accepted threshold for acceptable internal

consistency is a Cronbach's alpha coefficient of 0.7 or higher (Taber, 2018). However, it should be noted that internal consistency is just one aspect of reliability and other forms of reliability, such as test-retest reliability and inter-rater reliability, should also be considered depending on the nature of the measure.

TABLE 3. 4

Cronbach's alpha coefficient

Construct	No of Items	Cronbach's Alpha
HC	24	0.902
SC	9	0.705
CC	12	0.816
IC	11	0.803
IOC	3	0.787
GD	6	0.756
FP	6	0.733
MBM	5	0.827
MBS	5	0.898
ID	7	0.776
GI	6	0.724
ACM	4	0.714
NFP	5	0.779

Table 3.4 presents the Cronbach's alpha coefficient for all the constructs used in this study. Cronbach's alpha values of 0.7 or higher are generally considered acceptable for research instruments. Therefore, no items were deleted based on reliability concerns. Overall, the results suggest that the instrument used in this study was reliable in measuring the intended constructs.

3.6.4 Construct Validity

While reliability is a necessary condition for validity, it is not sufficient to establish validity. Reliability refers to the consistency or stability of measurements, while validity refers to the accuracy or truthfulness of measurements (Bougie & Sekaran, 2016; Churchill Jr,

1979). In other words, reliability is necessary for validity but not enough to ensure it. The measurements may be reliable, but they may still lack validity if they do not actually measure what they are intended to measure (Taber, 2018). Therefore, it is important to assess both reliability and validity of measurements in order to ensure the accuracy and usefulness of the research findings.

To further elaborate, content validity is concerned with how well a measurement instrument covers the intended domain of content. It involves a qualitative assessment of whether the items in the instrument are appropriate for measuring the construct of interest. This assessment is typically done by subject matter experts who evaluate the relevance and representativeness of the items.

Construct validity, on the other hand, is concerned with the degree to which a measurement instrument accurately measures the theoretical construct it is intended to measure (Brown et al., 1995). It involves a quantitative assessment of how well the scores on the instrument relate to scores on other measures that are theoretically related to the construct. Construct validity can be assessed using a variety of methods, such as convergent validity, discriminant validity, and criterion-related validity.

Overall, both content and construct validity are important aspects of ensuring the quality of a measurement instrument. Without sufficient content validity, a measurement instrument may not accurately capture the full range of the construct of interest. Without sufficient construct validity, a measurement instrument may not be measuring what it is intended to measure. Therefore, it is important to consider both content and construct validity when developing and evaluating measurement instruments.

In addition, it is widely accepted that construct validity is essential for establishing overall validity. Therefore, in this study, factor analysis was performed using principal components method in SPSS to assess construct validity. Factor analysis is a statistical method that aims to identify the underlying factors or constructs that explain the variation in the observed variables. Given the smaller sample size used in the pilot study, this study followed the approach of examining factor analysis on each construct separately, in line with previous studies conducted by researchers such as (Ahire et al., 1996; Black & Porter, 1996; Saraph et al., 1989).

Factor analysis is a multivariate statistical method used to identify the underlying structure or factors that explain the correlation patterns among a set of observed variables or items. It is commonly used in research to reduce the number of variables in a dataset and identify the key underlying factors that contribute to the observed correlations. In this context, it can be used to evaluate the construct validity of a measurement instrument by examining whether the items on the instrument are measuring the same underlying construct or constructs.

The principal components method is a common approach to factor analysis that identifies the components that explain the largest amount of variance in the data. This method can be useful for identifying the most important factors that are being measured by the items on the instrument.

It is worth noting that factor analysis can be sensitive to sample size, and larger sample sizes are generally preferred for more accurate results. However, if the sample size is small,

it may still be possible to conduct factor analysis on each construct separately, as was done in this study, to gain some insights into the construct validity of the instrument. Due to the smaller sample size in the pilot study, this study conducted factor analysis on each construct separately, in accordance with research conducted by scholars such as (Bijttebier et al., 2000; Black & Porter, 1996; Gefen & Straub, 2005; Sekaran, 2000), to evaluate construct validity. The goal of this approach was to ensure a more robust evaluation of construct validity.

Overall, factor analysis can be a useful tool for evaluating the construct validity of a measurement instrument. It can be useful for evaluating the construct validity of a measurement instrument, as it helps to identify whether the items in the instrument are measuring the same construct or not. However, it should be used in conjunction with other methods, such as content validity, to confirm that the instrument is measuring what it is intended to measure.

TABLE 3. 5

Factor Loading and Reliability

Construct	No. of Items	Factor Loading for items in first factor	KMO	Eigen Value	% of Variance	Items Deleted
HC	19	C10	0.531	7.87	51.69	C1, EE1, EE3, EE4, LE2
		C2	0.685			
		C3	0.711			
		C4	0.563			
		C5	0.653			
		C6	0.505			
		C7	0.518			
		C8	0.772			
		C9	0.586			
		EE2	0.519	2.68		

		EE5	0.583				
		EE6	0.781				
		EE7	0.743				
		LE1	0.523				
		LE3	0.548				
		LE4	0.711		1.86		
		LE5	0.824				
		LE6	0.699				
		LE7	0.729				
		SC3	0.81				
		SC1	0.728				
		SC2	0.719				
SC	9	SC4	0.604	0.71	2.93	51.866	SC5, SC8
		SC7	0.601				
		SC9	0.558				
		SC6	0.636				
		CK1	0.611				
		CK2	0.762				
		CK3	0.51				
		CK4	0.795		4.15		
		CK5	0.808				
CC	12	CK6	0.774	0.76		66.497	CK7
		CK8	0.547				
		SA1	0.559				
		SA2	0.77		1.43		
		SA3	0.695				
		SA4	0.781				
		MI1	0.851				
		MI2	0.903		3.47		
		MI3	0.736				
		PI1	0.897				
IC	11	PI2	0.855	0.68	1.81	66.841	MI4
		PI3	0.686				
		PI4	0.688				
		PrI1	0.859				
		PrI2	0.646		1.4		
		PrI3	0.668				
		IOC1	0.809				
IOC	3	IOC2	0.812	0.66	2.11	70.448	NIL
		IOC3	0.894				
		GD1	0.759				
GD	6	GD2	0.729				
		GD3	0.761	0.72	2.76	65.989	NIL
		GD4	0.65				

		GD5	0.514				
		GD6	0.622				
		FP1	0.529				
		FP2	0.657				
FP	6	FP3	0.719	0.68	2.63	61.838	NIL
		FP4	0.763				
		FP5	0.701				
		FP6	0.572				
		MBM1	0.857				
		MBM2	0.785				
MBM	5	MBM3	0.858	0.81	2.99	59.722	NIL
		MBM4	0.693				
		MBM5	0.646				
		MBS1	0.555				
		MBS2	0.511				
MBS	5	MBS3	0.684	0.59	1.91	51.169	NIL
		MBS4	0.784				
		MBS5	0.52				
		ID1	0.51				
		ID2	0.549				
		ID3	0.684				
ID	7	ID4	0.663	0.63	2.45	51.062	NIL
		ID5	0.684				
		ID6	0.551				
		ID7	0.563				
		GI1	0.771				
		GI2	0.711				
GI	6	GI3	0.763	0.64	2.05	54.172	NIL
		GI4	0.676				
		GI5	0.744				
		GI6	0.601				
		ACM1	0.745				
		ACM2	0.859				
ACM	4	ACM3	0.747	0.67	2.25	56.12	NIL
		ACM4	0.629				
		NFP5	0.769				
		NFP2	0.69				
NFP	5	NFP3	0.649	0.7	1.95	58.936	NIL
		NFP4	0.638				
		NFP1	0.698				

Table 3.5 shows the factor analysis results. The KMO measure is an important diagnostic tool in factor analysis. It is used to determine whether the data is suitable for factor analysis. The KMO index measures the degree of common variance among variables and ranges from 0 to 1, with higher values indicating greater suitability for factor analysis. Generally, a KMO value of 0.6 or above is considered acceptable for factor analysis (Hennink & Kaiser, 2022).

In the given scenario, the KMO values ranged from 0.586 to 0.806, indicating that the data was suitable for factor analysis. Although the values were not excellent, they were still acceptable for factor analysis. It is important to note that KMO values are only one aspect of factor analysis and should be used in conjunction with other diagnostic tools to ensure the accuracy and reliability of the analysis.

It is common practice to delete items with low factor loadings or KMO values in order to improve the reliability and validity of the factor analysis results. A factor loading of 0.50 or higher is considered to be a significant contribution to the factor (Hair et al., 2010). In addition, items with low individual KMO values (below 0.50) may indicate poor item-level reliability or measurement error, and may be removed to improve the overall reliability of the scale. In this case, items C1, EE1, EE3, EE4, LE2, SC5, SC8, CK7, and MI4 were identified as having low individual KMO values and were subsequently removed from the analysis. This is a common practice to ensure that the remaining items are contributing to a reliable and valid factor structure.

It is important to note that the decision to retain or delete items based on their factor loadings and KMO values should be made carefully and should take into account the theoretical

relevance of the items as well as the research context. While high factor loadings are desirable, it is possible for an item to have a lower loading but still contribute to the construct in a meaningful way. Similarly, low KMO values may indicate poor inter-item correlations, but this may be due to the unique characteristics of the sample or the construct being measured. It is important to use judgment and consider the context when making decisions about which items to retain or delete. The percentage of variance explained by each construct indicates the amount of variability in the data that can be attributed to that particular construct. Generally, a higher percentage of variance explained by a construct suggests that the construct is more relevant and important in explaining the underlying phenomenon. In this case, the range of 51.062 to 70.448 indicates that the constructs in the study are reasonably able to explain the model under study, and their contribution to the overall variance is significant.

It is important to note that while the pilot study showed that the instrument used had satisfactory levels of validity and reliability, the results of the main study still need to be analysed to draw any final conclusions. The pilot study is an important step in the research process as it helps to identify any issues with the instrument and make necessary adjustments before collecting data for the main study. However, the results of the main study should be carefully analysed to draw any final conclusions about the research questions or hypotheses.

3.7 Ethical Considerations

During the data collection process, all the protocols regarding ethics for instance privacy, secrecy of the respondent's identification, respondent's information and consent of the respondent to be a part of this study were assumed confidential. To achieve the aim of

confidentiality of respondent the cover letter was attached along with questionnaire. This cover letter categorically debriefed the aim of the questionnaire and also ensured the respondents about their privacy and secrecy provided to the researcher in the shape of information.

3.8 Summary

The research methodology used in this study is described in this chapter. The study used a quantitative approach, with SOE managers, executives and CEOs as the unit of analysis. The main aim of the study was to investigate the impact of political interference on the SOEs, and for this purpose, the study selected measurements from literature of related studies to ensure reliable and successful results. To conduct the study, the research design was structured around a survey questionnaire, which was distributed to the target population of SOE managers, executives, BOD and CEOs. The survey questionnaire was designed to measure the constructs of SOEs performance. The questionnaire was pre-tested through a pilot study to ensure its validity and reliability. In conclusion, the research methodology used in this study was designed to ensure the reliability and validity of the study, and to provide accurate and reliable results. The study employed a quantitative approach, with SOE managers, executives, BOD and CEOs as the unit of analysis, and used a survey questionnaire to collect data. The data collected from the survey was analysed using a combination of descriptive and inferential statistics, and the study used measurements from literature of related studies to ensure that the study was measuring what it intended to measure.

CHAPTER FOUR

FINDINGS

4.1 Introduction

This chapter describes the data analysis results obtained from a questionnaire using both descriptive and inferential statistics. PLS-SEM and SPSS were used for the analysis. Prior to conducting the SEM analysis, a preliminary data analysis was performed to check if the data satisfied the assumptions necessary for the analysis. This involved identifying and replacing missing values, assessing and removing outliers, and testing for normality and multi-collinearity. Descriptive analysis, specifically calculating the means and standard deviations of the variables, was also conducted to examine the variable profiles.

Following the procedures outlined in previous literature on SEM, two steps were undertaken to analyse the data. Initially, the researchers focused on evaluating the validity and reliability of the constructs under investigation to confirm that the measurements employed were accurate, valid, and reliable in measuring the targeted constructs.

In the second step, an empirical and statistical approach was used to estimate a structural model that aimed to test the suggested relationships and answer the research questions. Finally the obtained results include the INC, CG, and the moderating effect of GI.

4.2 Analysis of Survey Response

4.2.1 Response Rates

All 212 SOEs were targeted for the study, and questionnaires were distributed via the self-administered method. However, only 202 questionnaires were actually distributed, and out of those, 188 were returned. The study achieved a response rate of 93%, which is considered standard within the social sciences. Bougie and Sekaran (2016) suggest that a response rate of 35% is sufficient for survey analysis in the social sciences, while Baruch and Holtom (2008) and Iqbal et al. (2020) argue that a response rate of 35-40% is acceptable. This statement indicates that out of the total number of questionnaires distributed, three were not completed as instructed and were therefore excluded from the analysis. The remaining 185 completed questionnaires were deemed usable and were included in the analysis. The response rate for the study was 92%, which means that a large majority of the participants who were invited to complete the questionnaire did so. These usable responses were then used for further analysis. Table 4.1 shows the breakdown.

TABLE 4. 1

Number of Responses and response rate

Sr. No	Classification	Population N	Questionnaire Distributed	No. of Responses	Response Rate
1	Energy	41	41	39	95%
2	Financial	33	33	30	91%
3	Industrial and Engineering	20	19	17	89%
4	Promotional and Advocacy	46	46	42	91%
5	Services	26	26	22	84%
6	Trading	5	3	2	67%
7	Transportation	35	34	32	94%
8	Miscellaneous	6	3	1	16%
	Total	212	202	185	92%

It is important to note that sample size requirements vary depending on the research design and analysis methods used. While (Hair, 1998) suggested having a sample size greater than the number of covariates in the input data matrix, this guideline may not be applicable for all research studies. Additionally, Roscoe, (1975) suggestion of a sample size larger than 30 and less than 500 is a general guideline and may not be appropriate for all research studies. It is important to consider the specific research question, research design, and analysis methods when determining an appropriate sample size. It is suggested that to calculate the sample size multiplied 10 with the number of constructs (Sekaran, 2000; Sekaran & Bougie, 2019). Based on the finding, it was stated that 10 observations should require to estimate parameters of empirical ratio (Bollen, 1989; Lueckmann et al., 2021).

This study has 13 constructs (variables and dimensions) and to calculate parameters minimum sample size needed is 130 observation (13×10). If the method of Maximum Likelihood utilized, Hair et al. (1998) reported that at least size of sample should be from 100 to 150 responses. So, in this study almost 185 responses exist that fulfil the criteria and able to run the further analysis.

4.2.2 Test of Non-Respondent Bias

Evidence form existing literatures stated that results of the study might affected due to difference in personalities, behaviours, motivation and attitudes of both respondents and non-respondents (Malhotra et al., 2006; Soomro et al., 2020). In this study, a t-test was used to analyse response and non-response bias, which compared the similarities between the mean, standard error of mean, and standard deviation of the respondents and non-respondents.

Levene's test is a statistical test that is used to assess the equality of variances across different groups or samples. It is often used to check whether the variances of two or more groups are equal or not. In the context of the study you mentioned, it appears that the researchers used Levene's test to compare the variances of the early and late responses in the main study variables, namely CG and INC. This may have been done to determine if there were significant differences in the variability of these variables between the early and late responses. Additionally, the researchers may have used Levene's test to examine the moderating role of GI on the performance of state corporations. This could involve comparing the variances of the study variables for different levels of GI to see if there were significant differences in variance across these groups (Shultz & Luloff, 1990).

Researchers such as Malhotra et al. (2006) and Yadav and Rahman (2017) have argued that it may be more appropriate to include late respondents instead of non-respondents in the analysis, as the former may have simply forgotten to respond and can still provide valuable data if reminded. In the study of Malhotra et al. (2006) explained that late respondent and non-respondents have same characteristics. This study consists of two groups namely early responses and late responses. Early respondents are those who returned the questionnaire within a month after distribution and those who returned the questionnaires after a months considered late respondents.

Therefore, to address the potential bias caused by non-response, the 188 respondents were divided into two groups: early respondents (n=85) and late respondents (n=100). Levene's test is commonly used to test the equality of variances between two or more groups. In this case, the test was used to compare the variances of the early and late responses in the main

study variables, including CG and INC, as well as in testing the moderating role of GI on the performance of state corporations. Descriptive statistics, on the other hand, are used to summarize and describe the characteristics of a dataset, including measures of central tendency (e.g., mean, median, and mode) and variability (e.g., range, standard deviation, and variance). By using both Levene's and descriptive tests, the researchers were able to assess whether there were significant differences in variances between the early and late responses in the main study variables and to provide a descriptive summary of the dataset. A higher response rate in a survey means that there is a lower chance of non-response bias, which occurs when the responses obtained from a sample of the population do not accurately represent the views and opinions of the entire population. Non-response bias can lead to incorrect conclusions and reduce the reliability and validity of the survey results. Therefore, it is important to ensure a high response rate to improve the quality of survey data (Dillman, 2011).

After applying test, results depict that no significance values, that were above than 0.05, indicating that the variances were assumed equal approximately. In addition, late respondents and early respondents groups were found from same population so that's why no significant differences found in main variables ($p < 0.05$). Results of Leven's and descriptive test are given in table 4.2.

TABLE 4. 2

Test of Non-Respondent Bias

		N	Mean	Levine's test for Equality of variance		t-test for Equality of Means
				F	Sig*	Sig.* (2-tailed)
HC	Early	85	3.471	.391	.532	.124
	Late	100	3.654			
CC	Early	85	3.429	.015	.215	.314

	Late	100	3.704			
IC	Early	85	3.153	.021	.886	.812
	Late	100	3.486			
SC	Early	85	4.115	4.758	.130	.147
	Late	100	4.260			
ACM	Early	85	3.478	.054	.817	.214
	Late	100	3.625			.
ID	Early	85	3.265	.391	.533	.125
	Late	100	3.546			
MBM	Early	85	3.345	.021	.886	.141
	Late	100	3.791			
MBS	Early	85	3.629	1.598	.208	.455
	Late	100	3.886			
IOC	Early	85	3.635	.391	.533	.233
	Late	100	3.987			
GD	Early	85	3.268	1.227	.269	.240
	Late	100	3.472			
FP	Early	85	3.228	.150	.699	.167
	Late	100	3.429			
NFP	Early	85	3.291	.737	.392	.198
	Late	100	3.429			
GI	Early	85	3.631	5.368	.122	.611
	Late	100	3.799			

4.3 Preliminary Analysis

As stated by Hair *et al* (1998) that initial data screening is an important step in multivariate data analysis to ensure that the data meets the assumptions required for the chosen statistical method. This includes checking for outliers, normality, homogeneity of variance, and linearity. If any of these assumptions are violated, it can affect the validity of the statistical analysis and the interpretation of the results. Therefore, it is important to perform initial data screening before conducting any multivariate analysis. Preliminary data analysis is an

important step in the data analysis process, as it helps to identify potential issues with the data such as missing values, outliers, or non-normal distributions. By addressing these issues early on, researchers can ensure that their data is suitable for further analysis and avoid potential biases or errors in their results. Additionally, preliminary data analysis can provide insights into the underlying patterns and trends in the data, helping to guide the selection of appropriate statistical methods and hypothesis testing. The data collected from the 185 respondents was entered into an SPSS data file. Prior to analysis, preliminary data checks were conducted to ensure that the data met the assumptions of the statistical methods being employed. This includes checking for missing values, outliers, multi-collinearity, and normality regarding gathered information as suggested by (Hair et al., 2019; Hair Jr et al., 2010; Hair Jr et al., 2017; Tabachnick et al., 2007). This process of preliminary data analysis is crucial to ensure that the data is appropriate for the intended analysis and to identify any potential issues or limitations in the data. It helps to ensure that the data is reliable and valid, and that any outliers or missing data points are addressed appropriately. It also helps to identify any potential problems with multi-collinearity, which can affect the accuracy and interpretability of the results. Normality testing is also important to ensure that the data is distributed normally, which is a requirement for many statistical tests.

4.3.1 Missing Values Analysis

In quantitative research, the major concern of many researchers is to face an issue of missing data and researchers know that missing data has capability to affect the results of dataset negatively (Cavana et al., 2001; Creswell & Creswell, 2017; Pallant, 2020). Additionally, PLS-SEM will not work properly if dataset contain missing values. Hair et al. (2006) explained that use SPSS to treat these missing values by replacing them with mean substitution. Although there is no agreed-upon minimum percentage of missing

values that are appropriate and acceptable for statistical analysis, (Hair Jr et al., 2010; Hair Jr et al., 2017; Tabachnick et al., 2007) researchers generally consider a missing rate of 5% or less to be non-significant for making valid statistical inferences. Moreover, present study deployed that there is no missing values and data is usable for further analysis.

4.3.2 Outliers Assessment

Cateni et al. (2008) described about outliers are data points that are significantly different from other data points in the dataset and can potentially have a large impact on the analysis results. It is important to identify and handle outliers appropriately to ensure the validity and reliability of the analysis. Due to outliers in dataset it affect the results of regression coefficient that lead the results towards unreliability (Canavire-Bacarreza et al., 2021; PeiZhi & Ramzan, 2020; Verardi & Croux, 2009). The method used in this study to identify outliers was the method of frequency distribution through SPSS. This involved examining the distribution of values for each variable and identifying any values that appeared to be outside the range of the other values. These values were then inspected and determined to be potential outliers. On the basis of frequency distribution results, it depicted that none of the value was established outside the normal range. In this study, used the Mahalanobis distance (D2) as a tool that find out multivariate outlier in the data set (Braga et al., 2018; De Maesschalck et al., 2000; Sarmadi & Karamodin, 2020). Tabachnick et al. (2007) explained Mahalanobis distance is a measure of the distance between a point and a distribution, taking into account the covariance structure of the data. It is calculated as the square root of the Mahalanobis D2 statistic, which is a measure of the distance between a point and the centroid of the remaining cases, based on the covariance matrix of the data. It is often used to identify outliers in multivariate data analysis. Based on analysis, 103

observed variables were found in the present study, ($p > 0.001$) was the suggested benchmark of chi-square.

In the data set the Mahalanobis values which were greater than benchmark was going to delete. Referring to this criterion, 05 cases of outlier were detected and deleted them from this data set so that accuracy of the analysis technique could not affect by the outliers. Hence, outlier were deleted and final data set for analysis in the present study was 180. These 180 responses have been retained to use for further analysis.

4.3.3 Data Normality Assessment

These two statistical techniques correlation and regression tests are applied where linear association occur among the variables and data is normally distributed (Hair et al., 2012; Verardi & Croux, 2009). As the guidance provided by many researchers Coakes and Steed (2001); Kline (2015); Zikmund et al. (2013) normal distribution and a bell-shaped curve with no noticeable skewness in the data are considered as indicators of good data. Whereas, to test the normality of the dataset in a way is to check the histogram of residual values (Cohen, 2013; Moore, 2021; Norušis, 2006; Thielmann et al., 2020). Further, Cohen (2013) explained that vertical lines of histogram also a way to confirm that data is normally distributed. However, sampling stage has its own limitations due to that it is not an easy task to obtain a perfect normally distributed dataset for analysis.

Furthermore, Braga et al. (2018); Hair et al. (1998); Tabachnick et al. (2007) defined that observing the histogram is not the only way to check the normality of the dataset but there is another way to check normality of the data and that is the use of probability plots. Two other statistical tools kurtosis and skewness are also available to check the normality of the

data. Bougie and Sekaran (2016); Chua (2006); Sekaran and Bougie (2019) clarified that values of kurtosis and skewness fall between -2 and +2 than it is considered that dataset is distributed normally. Additionally, data considered as skewed distributed if the values of skewness fall outside the range that is -1 to +1 (Canavire-Bacarreza et al., 2021; Hair et al., 2019; Hair Jr et al., 2010).

It was assumed and stated in the past research that extremely non-normal data could also be useful for analysis in PLS-SEM because it provides precise model estimations (Hair et al., 2011; Rajapathirana & Hui, 2018; Reinartz et al., 2009; Wetzels et al., 2009). In addition, it is endorsed to researchers apply the normality test on the dataset (Creswell & Creswell, 2017; Hair et al., 2019; Hair et al., 2012). If the dataset is highly kurtosis or skewed that exaggerated the results of bootstrapped standard error estimation, as argued by Bougie and Sekaran (2016); Canavire-Bacarreza et al. (2021); Tabachnick et al. (2007), which in turn could affect the results of path analysis because exaggerated data underestimate the values of regression coefficient (Dijkstra, 1983; Fornell & Larcker, 1981; Ringle et al., 2012; Vilares et al., 2010). Therefore, drawing upon the suggestions of Coakes and Steed (2001); Creswell and Creswell (2017); Hair et al. (2006); Moore (2021); Tabachnick et al. (2007); Zikmund et al. (2013), in this research to identify the normality of the collected data applied a graphical method approach.

The Braga et al. (2018); Field (2009); Hair et al. (2006); Tabachnick et al. (2007) additionally suggested that due to large sample size, standard error decreased that would affect the values of kurtosis and skewness as a result it is easier to justify the normality of the data by using the plots. Field (2009); Verardi and Croux (2009) recommended that to ensure the non-violation of assumptions of normality used normal probability plot and

histogram. The dataset used in this study was analyzed and it was found that the histogram bars were closely aligned with the normal curve, indicating a normal distribution pattern as shown in Figure 4.1 and Figure 4.2. Additionally, the values of skewness and kurtosis presented in Table 4.3 were within the acceptable range, further confirming that the data did not violate the normality assumption. Thus, it can be concluded that the data used in this study met the normality assumption.

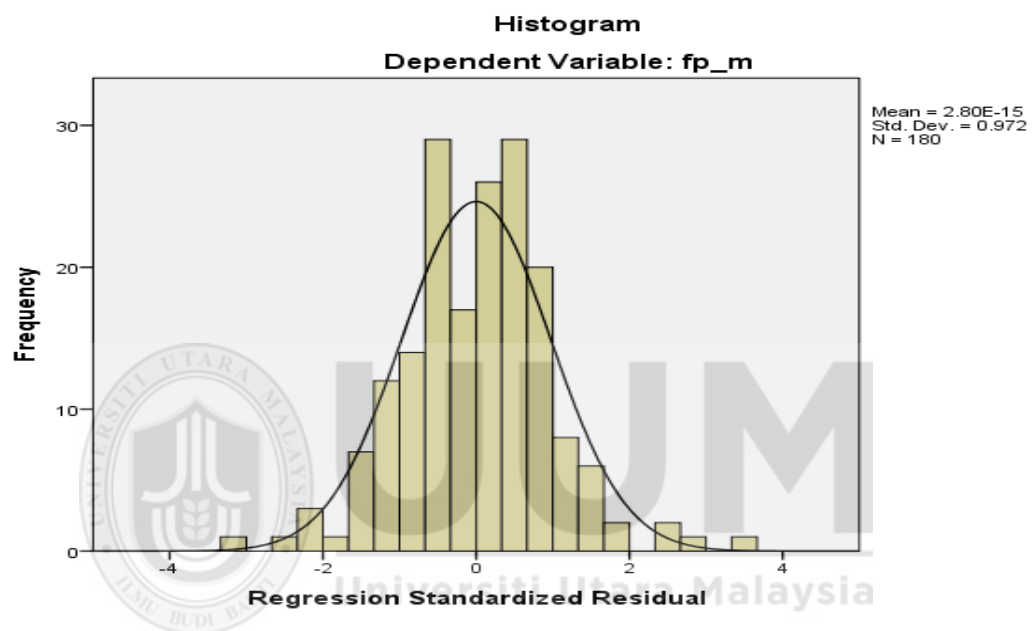


Figure 4.1 Normal Probability Plot and Histogram

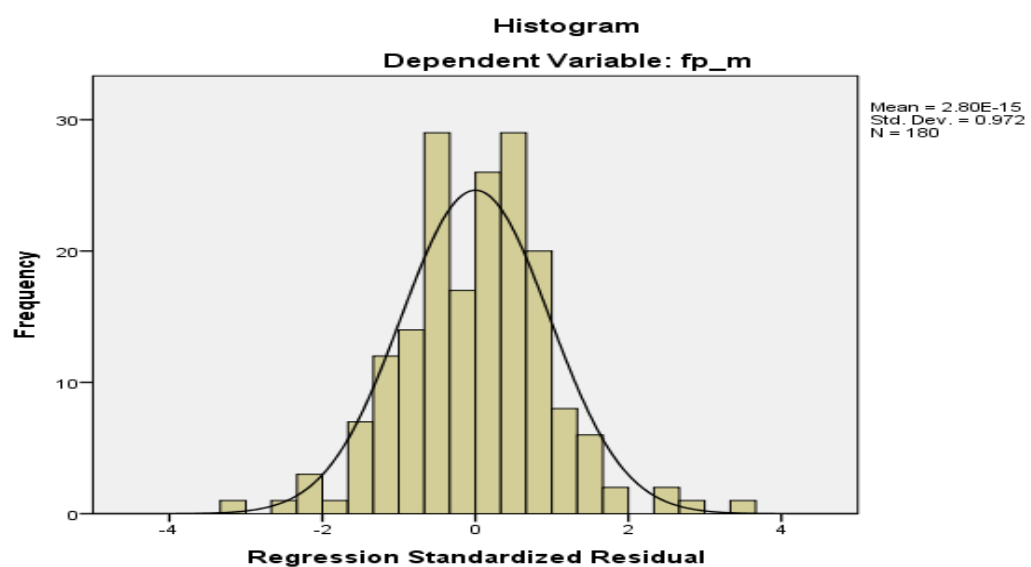


Figure 4.2 Normal Probability Plot and Histogram

TABLE 4. 3**Skewness and Kurtosis**

Variable	Mean	Std. Deviation	Skewness	Kurtosis
HC	3.5463	.88304	-.562	.535
CC	4.2333	.61726	-.435	-.830
IC	4.1311	.73091	-.625	-.186
SC	1.8611	.69543	.368	-.582
ACM	4.7093	.42724	-1.771	3.254
ID	1.8486	.69991	.589	-.206
MBM	1.7597	.74245	1.123	.672
MBS	2.7639	.46806	.497	2.324
IOC	4.2870	.71411	-1.055	.500
GD	4.1667	.70952	-.557	-.483
FP	4.1211	.64453	-.392	-.458
NFP	1.4306	.43986	.923	.561
GI	4.3370	.57464	-.420	-.826

4.3.4 Multi-collinearity Analysis

Multicollinearity refers to a high degree of correlation between two or more independent variables in a regression model, which can lead to unstable and unreliable estimates of the regression coefficients. This can occur when independent variables are highly correlated with each other, making it difficult to determine their unique contribution to the dependent variable. Hair et al. (2012); Hair Jr et al. (2010) describe important to assess the degree of multicollinearity before running multivariate data analysis techniques to ensure accurate estimation of coefficients and valid interpretation of the results. When two or more independent variables in a model are highly correlated with each other, it becomes difficult to determine the individual effects of each independent variable on the dependent variable. This is because the effect of one independent variable may be confounded or masked by

the effect of the other highly correlated independent variable. This can lead to inaccurate estimates of the coefficients of the independent variables and ultimately affect the interpretation of the results. Therefore, it is important to test for multi-collinearity and address it if it exists before running multivariate data analysis techniques.

It's important to note that multi-collinearity specifically refers to high correlation between independent variables (also called exogenous variables) in a regression model, rather than between latent constructs themselves. In a structural equation modelling (SEM) analysis, which often includes latent constructs, the issue of high correlation between latent constructs is usually referred to as "cross-loading" or "inter-correlation" between the latent variables. While high inter-correlation between latent variables can also be a concern, it is not the same issue as multi-collinearity. As mentioned by Creswell and Creswell (2017); Hair et al. (1998); Hair et al. (2006), multi-collinearity among the exogenous latent constructs can distort the estimation of the multivariate model and the statistical significance of variables. In particular, multi-collinearity can inflate the values of the standard error of coefficients, which can cause a statistically significant coefficient to become statistically insignificant (Johnson & Wichern, 2014; MacQueen, 1967; Manly & Alberto, 2016; Mertler & Reinhart, 2016; Meyers et al., 2016; Rencher, 2005; Stevens, 2012).

When multi-collinearity is present, the explanatory variables become highly correlated with each other, which makes it difficult to determine the independent effect of each variable on the response variable. This leads to unstable and inaccurate regression coefficients, which can make it hard to interpret the results of the analysis (Mertler & Reinhart, 2016; Rencher, 2005). Accurate estimation of the effect of independent variables on the dependent variable

is one of the main goals of multivariate data analysis. However, when multi-collinearity exists among the independent variables, it can make it difficult to isolate the individual effects of each independent variable on the dependent variable. Therefore, assessing multi-collinearity is an important step to ensure that the effect of each independent variable is accurately estimated in the model (Chatterjee & Yilmaz, 1992a). In past studies, there are various methods that have been used and suggested by researchers to detect issues of multi-collinearity. In view of different researchers Chatterjee and Yilmaz (1992b) and Peng and Lai (2012), to identify multi-collinearity correlation among the latent constructs can be used (Chatterjee & Yilmaz, 1992a; Meyers et al., 2016; Peng & Lai, 2012; Xu et al., 2019). It is generally agreed that a correlation value greater than 0.9 among the exogenous latent constructs is a strong indication of multi-collinearity (Hair et al., 1998; Kock, 2015; Kline, 2016). However, some researchers suggest that even correlation values greater than 0.8 or 0.7 should be considered as potential indicators of multi-collinearity (Cohen et al., 2013; Field, 2018). It is important to note that the specific threshold for identifying multi-collinearity may vary depending on the research context and the nature of the data. Table 4.4 provides figures that shows no correlation value among the exogenous latent constructs is greater than 0.90, indicating that there is no issue of multi-collinearity. However, it is important to note that the presence of high correlation values between exogenous latent constructs does not necessarily mean that there is multi-collinearity. It is still recommended to use other diagnostic methods, such as variance inflation factor (VIF) or tolerance, to assess multi-collinearity.

TABLE 4. 4**Correlation Matrix of the Latent Constructs**

	ACM	CC	FP	GD	GI	HC	IC	ID	IOC	MBM	MBS	NFP	SC
ACM	0.732												
CC	0.323	0.838											
FP	0.260	0.526	0.802										
GD	0.263	0.539	0.617	0.703									
GI	0.259	0.564	0.573	0.514	0.840								
HC	0.074	0.084	0.006	-0.115	0.044	0.609							
IC	0.293	0.569	0.563	0.742	0.646	-0.004	0.812						
ID	-0.283	-0.638	-0.596	-0.713	-0.617	0.007	-0.829	0.755					
IOC	0.127	0.302	0.481	0.468	0.499	-0.136	0.596	-0.551	0.815				
MBM	-0.200	-0.380	-0.455	-0.622	-0.435	0.108	-0.603	0.464	-0.598	0.787			
MBS	-0.031	0.116	0.094	0.116	0.189	-0.112	0.144	-0.074	0.090	-0.170	0.356		
NFP	-0.236	-0.515	-0.455	-0.434	-0.733	0.068	-0.468	0.541	-0.485	0.432	-0.190	0.772	
SC	-0.252	-0.663	-0.613	-0.671	-0.600	0.003	-0.72	0.716	-0.619	0.599	-0.096	0.523	0.809

VIF is a commonly used method to detect multi-collinearity in regression models. It measures the degree to which the variance of the estimated regression coefficient is increased due to collinearity among the independent variables. (Senaviratna & Cooray, 2019; Thompson et al., 2017). Hair et al. (2019) VIF is a commonly used method for detecting multi-collinearity, and the threshold for an acceptable value of VIF is often set at 5 or lower. Additionally, a tolerance value of less than 0.2 can also indicate the presence of multi-collinearity. Table 4.5 presents that tolerance values are high and VIF values are low, it indicates that there is no strong correlation between the predictor variables, which means there is no problem of multi-collinearity by Hair et al. (2019). Therefore, it is important to check for both tolerance and VIF values to ensure the absence of multi-collinearity.

TABLE 4. 5

Tolerance and Variance Inflation Factors (VIF)

Constructs	Tolerance	VIF
HC	.928	1.078
CC	.437	2.289
IC	.277	4.648
SC	.309	3.235
ACM	.863	1.158
ID	.396	4.090
MBM	.486	2.059
MBS	.919	1.088
IOC	.465	2.152
GD	.484	2.067
GI	.928	1.078

4.4 Descriptive Analysis

The descriptive analysis of the constructs given in Table 4.3 showed that the mean value of HC is 3.527 and standard deviation calculated is 0.826. The mean value shows that the respondents valued the HC and they are convinced that HC is important element in the performance of SOEs.

The mean value of CC, which is 4.215 with a standard deviation of 0.602, indicates that most respondents' answers fell between neutral and agreement, but were more inclined towards agreement. On the other hand, the mean value of IC is 4.149 with a standard deviation of 0.663, indicating that the respondents' answers fell between neutral and agreement, but were more inclined towards neutrality. Finally, SC has a mean value of 1.861 and a standard deviation of 0.695, suggesting that respondents placed less value on this construct of INC compared to the other three constructs.

The mean value computed for ACM (4.709) and standard deviation (0.427) depicts that ACM is important construct of the CG. ID has a mean value of 1.829 with a standard deviation of 0.670, the mean value of MBM is (1.913) with a standard deviation of 0.805, the mean value of MBS (2.763) and deviation value is 0.468, mean value of IOC is (4.287) and standard deviation value is 0.714, GD mean value is (4.166) with a standard deviation (0.709) the mean value of all the constructs of CG falls between neutral and agree, but more inclined towards the agree. This shows that respondents give the weightage to these constructs for analysing the performance of SOEs. Meanwhile, the mean value of GI (4.337) and standard deviation (0.574) reflects that average level of the GI is reported by the respondents.

FP has a mean value of 4.120 and a standard deviation of 0.664, while the values of NFP mean value is (2.565) with a standard deviation (0.994) which indicates that mean value is in between agreed and neutral, but more inclined towards agree, which shows a higher that respondents focus on these constructs.

4.4.1 Profile of Respondents

In the table 4.3 provides descriptive statistics for the demographic profile of the respondents. The results show that the majority of the respondents (80.56%) are male and 19.44% are female. In terms of age groups, the highest percentage of respondents (72.78%) are above 35 years old, followed by 23.89% in the age group of 31-35 years old, and only 3.33% in the age group of 26-30 years old, as shown in Table 4.6.

TABLE 4.6
Profile of the Respondents

Demographic variables	Components	Frequency	Percent
Gender	Male	145	80.56
	Female	35	19.44
	Total	180	100.0
Age of Respondents	21-25 Years	00	0.00
	26-30 Years	06	3.33
	31-35 Years	43	23.89
	Above 35 Years	131	72.78
	Total	180	100.0
Current Job Position	Secretary	12	06.67
	CEO	85	45.90
	CFO	28	15.56
	Director	60	32.22

	Total	185	100.0
Qualification	Graduation	22	12.22
	Masters	97	52.22
	M.Phil.	55	29.44
	PhD.	11	06.11
	Total	185	100.0
Professional Qualification	Certified Public Accountant	35	19.44
	Certified Management Accounting	26	14.44
	Chartered Accountant of Pakistan	42	23.33
		82	42.78
	No Professional Qualification		
	Total	185	100.0

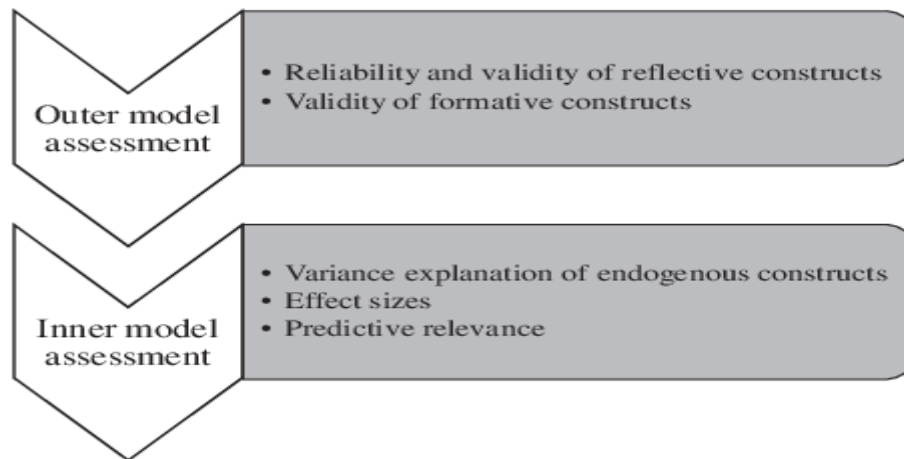
Demographic profile also revealed that majority 45.9% of the respondents are working as a CEO, 32.22% working as a director, 15.56% working as a CFO and remaining 6.67% working as secretary level in enterprises. In the education profile, most of the respondents 52.22% hold a master's degree, 29.44% have M.Phil. 12.22% holds a Graduation degree and 6.11% have a PhD degree. In addition to that demographic profile shows that 23.33% respondents are chartered of accountant, 19.44% are Certified Public Accountant, 14.44% are certified management accounting and 42.78% are not professionally qualified personals.

4.5 Assessment of PLS-SEM Path Model

The current study utilized a two-step approach to analyze and report the data on the performance of SOEs, as recommended by (Henseler et al., 2012). In assessing model fitness using fitness indices, Henseler et al. (2012) and Hair Jr et al. (2020) recommend that

the goodness of fit index (GoF) is not appropriate for assessing model fitness using fitness indices because it is unable to distinguish between valid and invalid models. Therefore, the GoF index is not suitable for evaluating the validation of the model in the current study. In order to assess the goodness of fit in the current study, Standardized Root Mean Square Residual (SRMR) was used as suggested Kashif et al. (2018); TEHSEEN et al. (2020) and it is known as absolute measure of model fit.

The SRMR, which stands for standardized root mean square residual, measures the difference between the observed correlations and the predicted correlations in the model. Byrne (2013) and Hu and Bentler (1999) have suggested that a value of less than 0.08 is considered a good fit based on established thresholds. The SRMR value of 0.078 calculated in the current research is within the acceptable range, indicating that the model has a good fit. This means that the predicted correlations between the latent constructs in the model closely match the observed correlations, which is a positive indication of the model's validity. Moreover, Henseler et al. (2012); Reinartz et al. (2009) or evaluating and reporting results. The first step involves assessing the measurement model, which includes examining the reliability and validity of the latent constructs. In the second step, a structural model is used to test the proposed hypotheses. Overall, the two-step approach provides a rigorous framework for evaluating and reporting results in structural equation modelling. Two step approach figure is listed below in Figure 4.3



Source: Adapted from Henseler et al. (2012)

Figure 4.3 PLS Path Modelling Assessment (Two-Step Process)

4.6 Assessment of Measurement Model

The current study followed a recommended two-step method to evaluate and report the generated results. As suggested researchers Byrne (2013); Hair et al. (2012); Henseler et al. (2012); Kline (2015) in the first step, the measurement model was assessed to ensure the reliability and validity of the measurement scales used in the study. In this step, the validity of content, internal consistency, discriminant validity, convergent validity, and reliability of every individual item were assessed. The detailed assessment of the measurement model and its interpretation are provided in the next section of the study.

4.6.1 Individual Item Reliability

The outer loadings of each measurement item represent the strength of the relationship between the item and its underlying construct in a structural equation modelling analysis (Byrne, 2013; Duarte & Raposo, 2010; Hair Jr et al., 2020; Hair Jr et al., 2017; Kline, 2015; Sekaran, 2000). Typically, items with an outer loading of 0.40 or higher are considered to be acceptable, while items with an outer loading of 0.70 or higher are considered to be strong indicators of the construct. It is essential to mention that although

these guidelines provide a general framework, the specific thresholds for acceptable and strong indicators may vary depending on the research context and the specific research question. To evaluate the reliability of individual items, the current study used an acceptable threshold for the outer loadings of each measurement item. The items with outer loadings ranging between 0.40-0.70 were retained to ensure an acceptable level of reliability. Table 4.7 provides detailed information on the factor loadings of the retained items, where it can be observed that all the items have acceptable factor loadings ranging from 0.709 to 0.881. Out of a total of 103 items, 44 were excluded from the analysis due to lower factor loadings. As a result, a total of 59 items were retained for analysis. The acceptable threshold for individual item reliability based on the outer loadings of each measurement item was set, and the retained items have met this threshold. This suggests that the retained items are reliable indicators of their corresponding constructs.

4.6.2 Internal Consistency Reliability

Cronbach's Alpha and composite reliability coefficient are two commonly used measures to assess the internal consistency reliability of a scale in research settings. They both provide a measure of the degree to which the items in a scale are measuring the same underlying construct or idea. (Bijttebier et al., 2000; Sekaran & Bougie, 2019). High values of Cronbach's Alpha and composite reliability indicate that the scale has good internal consistency, which means that the items are measuring the same construct reliably. Cronbach's Alpha is a measure of how closely related a set of items are as a group, whereas composite reliability coefficient is an estimate of the reliability of a scale, taking into account the inter-correlations among its items (Bacon et al., 1995; Hair Jr et al., 2017; Peterson & Kim, 2013).

The composite reliability coefficient is used in the present study to measure internal consistency and ensure that the measurement scale has sufficient reliability. There were two reasons for reporting the composite reliability coefficient over Cronbach's alpha.

Cronbach's alpha assumes that each item in a scale contributes equally to the overall score of the construct being measured. This can be problematic if some items are better indicators of the construct than others. In contrast, composite reliability takes into account the individual factor loadings of each item on the construct, giving more weight to items with higher loadings. This approach is less biased and provides a more accurate measure of internal consistency and reliability (Barclay et al., 1995; Götz et al., 2010).

A composite reliability coefficient value of 0.70 or above is generally considered acceptable for establishing a satisfactory level of reliability and internal consistency. Values below 0.60 suggest a lack of internal consistency and reliability. It is important to use appropriate reliability coefficients to accurately assess the reliability of a measurement instrument. Bagozzi and Yi (1988) and Hair et al. (2011) furnished the general guideline for an acceptable level of internal consistency and reliability using composite reliability coefficient is a value of 0.70 or above for each focal construct. This means that if a construct has a composite reliability coefficient of 0.70 or higher, it can be considered reliable and consistent in measuring the underlying concept it is intended to measure. However, it is important to note that this is a general guideline and the acceptable level of reliability may vary depending on the specific research context and the goals of the study.

Table 4.7 displays the composite reliability coefficients estimated for the latent constructs in the current study. The composite reliability for HC (0.926), SC (0.867), CC (0.881), IC

(0.870), IOC (0.889), GD (0.835), MBM (0.861), MBS (0.756) ID (0.844) ACM (0.847) FP (0.863) NFP (0.854) and GI (0.881). The composite reliability coefficients of the study's latent constructs, which range from 0.756 to 0.926, indicate that the constructs have acceptable levels of internal consistency and reliability, according to the acceptable threshold (Hair et al., 2016; Sarstedt et al., 2019).

In the full measurement model, as presented in Figure 4.4, all the retained constructs are shown with their respective item loadings. The item loadings for each construct range from 0.709 to 0.881, indicating that all items contribute significantly to their respective constructs. This suggests that the retained items are good indicators of the constructs they represent and the full measurement model is a good fit for the data.



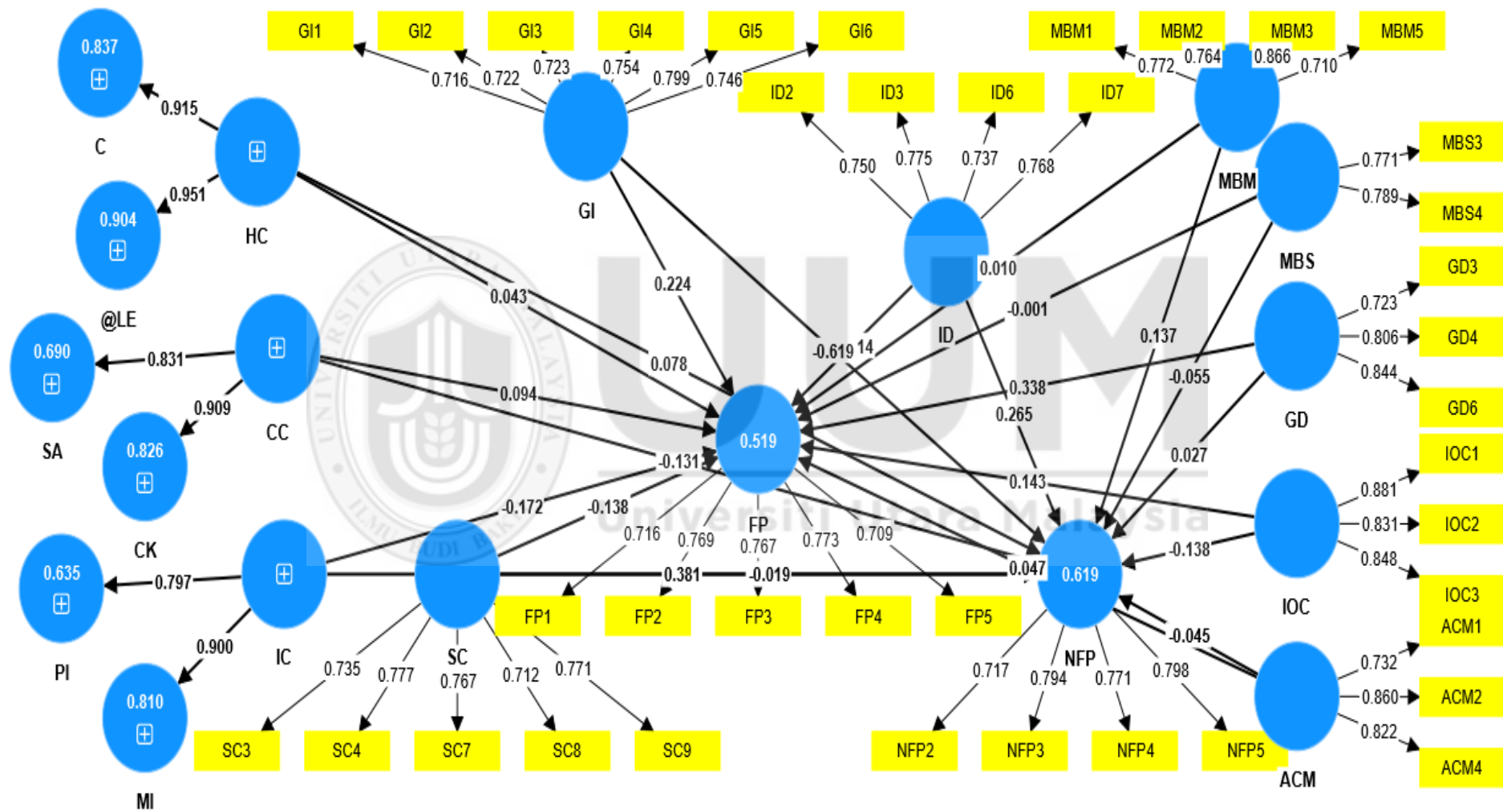


Figure 4.4 Factor Loading

TABLE 4. 7
Loadings, Composite Reliability and Average Variance Extracted

Variable name	Dimensions	Measurement Item	Loading	Composite Reliability (CR)	Average Variance Extracted
Human Capital	Learning and Education	LE4	0.765	0.926	0.611
		LE5	0.762		
		LE6	0.765		
		LE7	0.811		
	Creativity	C10	0.765		
		C2	0.807		
		C3	0.773		
		C4	0.760		
Structural Capital	(SC)	C6	0.772	0.867	0.567
		SC3	0.735		
		SC4	0.777		
		SC7	0.767		
	strategic alliance (SA)	SC8	0.712		
		SC9	0.771		
		SA2	0.716		
		SA3	0.725		
Customer Capital	customer knowledge (CK)	CK1	0.771	0.881	0.553
		CK5	0.771		
		CK7	0.727		
		CK8	0.750		
Innovation Capability	Product innovativeness (PI)	PI3	0.734	0.889	0.501
		PI4	0.720		
	Market innovativeness (MI)	MI1	0.771		
		MI2	0.807		
		MI3	0.746		
Independence of Committee	(IOC)	IOC1	0.881	0.889	0.729
		IOC2	0.831		
		IOC3	0.848		
Gender Diversity	(GD)	GD3	0.723	0.835	0.629
		GD4	0.806		
		GD6	0.844		
Financial Performance	(FP)	FP1	0.716	0.863	0.559
		FP2	0.769		
		FP3	0.767		

		FP4	0.773		
		FP5	0.709		
		MBM1	0.772		
Management Board Meeting	(MBM)	MBM2	0.764	0.861	0.609
		MBM3	0.866		
		MBM5	0.71		
Management Board Size	(MBS)	MBS3	0.771	0.756	0.608
		MBS4	0.789		
		ID2	0.75		
Independent Director	(ID)	ID3	0.775	0.844	0.574
		ID6	0.737		
		ID7	0.768		
		GI1	0.716		
		GI2	0.722		
Government Intervention	(GI)	GI3	0.723	0.881	0.553
		GI4	0.754		
		GI5	0.799		
		GI6	0.746		
Audit Committee Meeting	(ACM)	ACM1	0.732		
		ACM2	0.86	0.847	0.650
		ACM4	0.822		
		NFP2	0.717		
Non-Financial Performance	(NFP)	NFP3	0.794	0.854	0.594
		NFP4	0.771		
		NFP5	0.798		

4.6.3 Convergent Validity

The convergent validity is actually the intra item high correlation. It means that the items of the construct should have correlation among each other (Hair et al., 2006). In this study the convergent validity is measured through average variance extracted (AVE) of each latent construct.

Fornell and Larcker (1981) recommended the AVE method to assess the convergent validity. However, Chin (1998) described that to analyse the convergent validity, it is

important that average variance of individual item that is extracted through AVE should be at least 0.50 or more. The scores of each individual construct of the present study have attained the minimum of .50 AVE as show in the Table 4.7. So as per the recommendation of Chin (1998) it is determined that convergent validity of present study demonstrates adequately.

4.6.4 Discriminant Validity

According to Duarte and Raposo (2010), discriminant validity is a concept in structural equation modelling (SEM) that refers to the ability of a measure or construct to be distinguishable from other related but distinct constructs. Assessing discriminant validity is crucial because it ensures that the measures used in the study are distinct and not overlapping, which could lead to biased estimates and inaccurate conclusions. The average variance extracted (AVE) is a commonly used method to assess discriminant validity in structural equation modeling (SEM). AVE is calculated as the average of the squared factor loadings of the items belonging to a construct, and it measures the amount of variance captured by the construct relative to the measurement error. The rule of thumb is that the AVE of each construct should be greater than the squared correlations between that construct and other constructs in the model to demonstrate discriminant validity (Fornell & Larcker, 1981).

Actually, the criteria for assessing discriminant validity proposed by Chin (1998) is slightly different. Chin (1998) suggested comparing the square root of the AVE for each construct with the correlation coefficients between that construct and other constructs in the model. If the square root of the AVE is greater than the correlation coefficient, then discriminant

validity is supported. This method is known as the Fornell-Larcker criterion, which is a variation of Chin's original criteria.

Fornell and Larcker (1981) proposed that the square root of the average variance extracted (AVE) for a latent construct should be greater than the correlations between that construct and other constructs in the model in order to establish discriminant validity. This is because the AVE represents the amount of variance that is captured by the construct's indicators and not by measurement error, while the correlations represent the shared variance between constructs. If the AVE is lower than the correlation, it suggests that the construct shares too much variance with other constructs, indicating a lack of discriminant validity.

According to the Table 4.7 AVE values for latent constructs were above the benchmark that is 0.50. Meanwhile the results of correlation matrix which is shown in Table 4.5, it can be observed that the square root of the average variance extracted (AVE) is shown in bold text. These values are greater than the correlation values between the latent variables. As suggested Fornell and Larcker (1981) it could be determined that in the present study all the values of discriminant validity shown adequate results.

The HTMT method proposed by Henseler et al. (2014) is a useful alternative to assess discriminant validity. It involves computing the ratio of the correlation between two constructs to the correlations between each construct and its indicators (multitrait), and then comparing it to the correlation between two constructs to determine if it is significantly different from 1 (monotrait). A ratio below 0.85 indicates that the constructs have discriminant validity. This method is seen as more robust than previous methods because

it takes into account the correlations between the indicators of the same construct, which can affect the assessment of discriminant validity.

It appears that the study has used the HTMT ratio of correlations to assess the discriminant validity of the constructs. According to this method, if the HTMT value is greater than the threshold value of 0.85 Kline (2015) or 0.90 Gold et al. (2001), then there is a problem of discriminant validity. However, in the current study, all the HTMT values were found to be below both threshold values, indicating that the constructs have an acceptable level of discriminant validity. These results are presented in table 4.8.

Chin (1998) proposed a criterion for assessing discriminant validity by comparing the indicator loadings with cross-loadings. The rule of thumb is that the indicators should have higher loadings on their intended construct than on any other construct. This can be done by examining the pattern matrix or the cross-loading matrix in the SEM-PLS output. If the indicators load more heavily on their intended construct than on any other construct, it provides evidence of discriminant validity.

Table 4.9 presents the results of the assessment of discriminant validity by comparing the indicator loadings and cross-loadings. According to Chin's (1998) suggested that for sufficient discriminant validity, the indicator loadings should be higher than the cross-loadings. The results indicate that all the values of cross loading are less than the values of all the loading values indicating that there is sufficient discriminant validity in the study, indicating that there is sufficient discriminant validity in the study.

TABLE 4. 8**HTMT Ratio**

	ACM	CC	FP	GD	GI	HC	IC	ID	IOC	MBM	MBS	NFP	SC
ACM													
CC	0.41												
FP	0.334	0.635											
GD	0.355	0.697	0.815										
GI	0.322	0.679	0.688	0.66									
HC	0.11	0.124	0.119	0.157	0.922								
IC	0.375	0.689	0.697	0.479	0.789	0.141							
ID	0.362	0.786	0.751	0.578	0.775	0.101	0.077						
IOC	0.158	0.35	0.581	0.592	0.586	0.165	0.71	0.688					
MBM	0.259	0.445	0.551	0.81	0.518	0.15	0.745	0.596	0.765				
MBS	0.136	0.248	0.22	0.282	0.346	0.202	0.268	0.163	0.172	0.314			
NFP	0.312	0.635	0.575	0.574	0.896	0.119	0.588	0.696	0.602	0.542	0.357		
SC	0.324	0.798	0.756	0.882	0.727	0.077	0.884	0.412	0.753	0.734	0.181	0.655	

TABLE 4. 9

Cross Loadings

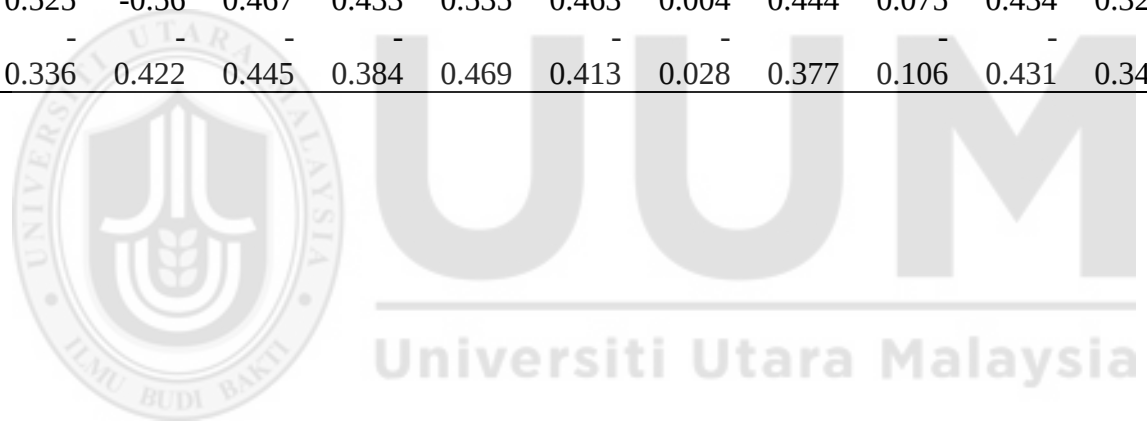
	ACM	C	CK	FP	GD	GI	ID	IOC	LE	MB M	MBS	MI	NFP	PI	SA	SC
ACM1	0.732	0.099	0.206	0.169	0.175	0.178	0.112	0.08	0.067	0.155	0.078	0.078	0.151	0.159	0.226	0.189
ACM2	0.860	0.002	0.146	0.221	0.266	0.212	0.262	0.126	0.041	0.151	0.019	0.176	0.242	0.21	0.297	0.211
ACM4	0.822	0.135	0.2	0.233	0.185	0.234	0.286	0.095	0.135	0.182	0.01	0.152	0.167	0.328	0.212	0.211
C2	0.011	0.727	0.027	0.069	0.086	0.016	0.002	0.129	0.733	0.063	-0.1	0.016	0.077	0.018	0.011	0.031
C3	0.004	0.746	0.083	0.125	0.097	0.103	0.023	0.002	0.71	0.09	0.044	0.098	0.02	0.045	0.079	0.043
C4	0.017	0.751	0.087	0.008	0.136	0.015	0.078	0.098	0.651	0.114	0.008	-0.11	0.084	0.046	0.099	0.069
C6	0.068	0.766	0.11	0.074	0.135	0.057	0.02	-0.09	0.7	0.06	0.055	0.152	0.027	0.035	0.06	0
CK1	0.302	0.115	0.775	0.377	0.339	0.387	0.386	0.154	0.111	0.297	0.036	0.222	-0.3	0.304	0.543	-0.47
CK5	0.246	0.105	0.807	0.372	0.389	0.356	0.463	0.16	0.055	0.258	0.064	0.354	0.394	0.361	0.523	0.465
CK7	0.186	0.069	0.729	0.367	0.338	0.394	0.418	0.206	0.053	0.259	0.135	0.283	0.365	0.371	0.488	0.419
CK8	0.234	0.095	0.701	0.437	0.45	0.461	0.666	0.262	0.084	0.222	0.023	0.354	0.385	0.406	0.566	0.535

							-			-			-			-
FP1	0.226	0.004	0.324	0.716	0.522	0.467	0.416	0.356	0.017	0.316	0.085	0.309	0.374	0.492	0.476	0.464
							-			-			-			-
FP2	0.219	0.069	0.365	0.769	0.523	0.477	0.428	0.249	0.041	0.344	0.121	0.293	0.336	0.509	0.477	0.401
		-					-		-	-			-			
FP3	0.252	0.076	0.418	0.767	0.5	0.349	0.518	0.394	0.067	0.415	0.017	0.374	0.299	0.412	0.423	-0.46
							-			-			-			-
FP4	0.072	0.099	0.329	0.773	0.387	0.415	0.448	0.441	0.074	-0.33	0.089	0.307	0.365	0.41	0.45	0.525
							-			-			-			-
FP5	0.195	0.019	0.248	0.709	0.361	0.44	0.408	0.359	0.022	0.288	0.039	0.285	0.327	0.466	0.321	-0.44
		-					-		-	-			-			-
GD3	0.144	0.121	0.306	0.471	0.723	0.348	0.488	0.56	0.099	0.749	0.119	0.559	0.372	0.497	0.471	0.611
		-					-		-	-			-			-
GD4	0.191	0.112	0.363	0.474	0.806	0.369	0.543	0.222	0.092	0.374	0.143	0.467	0.235	0.473	0.441	0.443
		-					-		-	-			-			-
GD6	0.281	0.073	0.389	0.517	0.844	0.491	0.653	0.317	0.049	0.353	0.026	0.548	0.406	0.462	0.471	0.529
							-			-			-			-
GI1	0.116	0.063	0.386	0.344	0.322	0.716	0.466	0.242	0.076	0.313	0.15	0.411	0.459	0.416	0.469	0.474
							-			-			-			-
GI2	0.166	0.034	0.419	0.325	0.404	0.722	0.534	0.378	0.113	0.259	0.059	0.415	0.434	0.436	0.437	0.451
							-			-			-			-
GI3	0.295	0.118	0.256	0.404	0.312	0.723	0.471	0.401	0.125	0.332	0.159	0.352	0.573	0.495	0.412	0.443
							-			-			-			-
GI4	0.258	0.024	0.307	0.469	0.371	0.754	0.439	0.392	0.011	-0.3	0.156	0.318	0.647	0.407	0.429	0.405
		-					-		-	-			-			-
GI5	0.168	0.007	0.307	0.49	0.471	0.799	0.466	0.386	0.068	0.308	0.153	0.39	0.549	0.563	0.479	0.458
							-			-			-			-
GI6	0.131	0.03	0.261	0.482	0.41	0.746	0.409	0.406	0.027	0.417	0.15	0.428	0.562	0.511	0.439	0.466

ID2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.252	0.085	0.542	0.493	0.497	0.492	0.750	0.327	0.076	0.275	0.007	0.393	0.444	0.447	0.495	0.531
ID3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.241	0.016	0.449	0.518	0.519	0.506	0.775	0.405	0.066	0.334	0.074	0.433	0.428	0.446	0.484	0.538
ID6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.221	0.067	0.289	0.378	0.549	0.406	0.737	0.403	0.028	0.352	0.069	0.809	0.344	0.448	0.455	0.479
ID7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.133	0.093	0.316	0.393	0.612	0.452	0.768	0.554	0.069	0.466	0.083	0.895	0.41	0.446	0.468	0.62
IOC1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.055	0.154	0.211	0.469	0.403	0.471	0.485	0.881	0.131	0.546	0.016	0.602	-0.39	0.416	0.333	0.512
IOC2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.092	-0.11	0.088	0.277	0.25	0.33	0.297	0.831	0.118	0.465	0.025	0.445	-0.4	0.256	0.189	-0.39
IOC3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.171	0.109	0.252	0.457	0.509	0.457	0.588	0.848	0.098	0.514	0.173	0.613	-0.45	0.44	0.396	-0.65
LE4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.103	0.656	0.017	-0.03	0.117	0.01	0.024	0.156	0.789	0.081	0.068	0.054	0.061	0.004	0.024	0.005
LE5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.126	0.623	0.082	0.025	-0.05	0.044	0.004	0.199	0.790	0.129	0.166	0.087	0.087	0.037	0.074	0.014
LE6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.093	0.651	0.076	0.076	0.079	0.022	0.013	0.119	0.798	0.073	0.154	0.036	0.06	0.023	0.018	0.004
LE7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.049	0.688	0.103	0.045	0.018	0.084	-0.07	0.067	0.779	0.068	0.104	0.02	0.011	0.056	0.037	0.014
MBM 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.101	0.203	0.134	0.262	0.349	0.263	0.277	0.612	0.187	0.772	0.083	0.444	0.304	0.384	0.209	0.408
MBM 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.154	0.064	0.158	0.272	0.417	0.301	0.344	0.533	0.068	0.764	0.143	0.486	0.304	-0.39	-0.23	0.384
MBM 3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.185	0.103	0.309	0.427	0.664	-0.36	0.483	0.516	0.081	0.866	0.145	0.557	0.371	0.477	0.458	0.591

MBM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	0.168	0.035	0.336	0.413	0.452	0.404	0.314	0.261	0.028	0.71	0.148	0.272	0.352	-0.4	0.369	0.447
MBS3	0.072	0.069	0.021	0.069	0.125	0.092	0.012	0.028	-0.11	0.155	0.771	0.04	0.147	0.068	0.099	0.068
MBS4	0.022	0.001	0.039	0.077	0.057	0.202	0.102	0.111	-0.08	-0.11	0.789	0.116	-0.15	0.188	0.146	0.082
MI1	0.215	0.071	0.316	0.369	0.57	0.413	0.735	0.398	0.027	0.373	0.054	0.829	0.339	0.44	0.466	0.502
MI2	0.155	0.094	0.34	0.399	0.632	0.462	0.769	0.556	0.062	0.481	0.088	0.906	0.425	0.453	0.487	0.645
MI3	0.083	0.163	0.223	0.318	0.515	0.449	0.573	0.739	0.116	0.589	0.117	0.845	0.394	0.466	0.36	0.569
NFP2	0.219	-0.06	0.289	0.282	0.277	0.536	0.397	-0.29	0.075	0.347	0.145	0.289	0.717	0.328	-0.37	0.39
NFP3	0.245	0.166	0.294	0.435	0.402	0.616	0.427	-0.45	0.146	0.336	-0.11	0.337	0.794	0.268	0.421	0.418
NFP4	0.127	0.113	0.215	0.337	0.306	0.554	0.346	0.327	0.056	0.25	0.086	0.321	0.771	0.329	0.333	0.346
NFP5	0.135	0.014	0.349	-0.34	0.344	0.552	0.485	0.412	0.014	0.388	0.235	-0.43	0.798	0.296	0.404	0.449
PI3	0.275	0.088	0.373	0.555	0.53	0.582	0.532	0.332	0.094	0.446	0.168	0.404	0.318	0.882	0.533	0.517
PI4	0.397	0.117	0.424	0.489	0.553	0.539	0.515	0.207	0.14	0.383	0.118	0.393	0.284	0.789	0.531	0.481
SA2	0.14	0.047	0.55	0.352	0.41	0.435	0.406	0.275	0.063	0.368	0.19	0.366	0.438	0.358	0.739	0.562
SA3	0.327	0.057	0.498	0.438	0.47	0.48	-0.5	0.285	0.071	0.292	0.12	0.427	-0.41	0.502	0.833	0.503

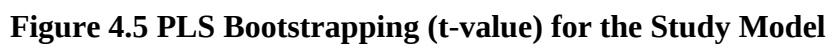
SC3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.221	0.067	0.347	0.403	0.552	0.439	0.611	0.744	0.025	0.525	-0.07	0.627	0.39	-0.43	0.435	0.735
SC4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.249	0.05	0.524	0.439	0.506	0.449	0.519	0.353	0.033	0.454	0.057	0.469	0.436	0.523	0.631	0.777
SC7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.225	0.013	0.405	0.468	-0.55	0.539	0.554	-0.38	0.074	0.451	0.058	0.549	0.459	0.511	0.534	0.767
SC8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.156	0.022	0.525	-0.56	0.467	0.433	0.535	0.463	0.004	0.444	0.075	0.434	0.328	0.459	0.554	0.712
SC9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0.088	-0.03	0.336	0.422	0.445	0.384	0.469	0.413	0.028	0.377	0.106	0.431	0.346	0.437	0.563	0.771



4.7 Assessment of Significance of the Structural Model

The measurement model is used to assess the reliability and validity of the measurement scales used in the study, while the structural model uses SEM-PLS to test the proposed relationships between the latent variables. Together, the two models provide a comprehensive analysis of the research hypotheses. For running the structural model 5000 bootstrapping technique were used by following the guidelines of (Hair et al., 2012). Figure 4.5 illustrates the direct relationship between the independent variables and the dependent variable, while Table 4.10 presents detailed information on the results, including the coefficient of determination, standard deviation, t-value, and significance.





In the proposed model, H1a states that HC is positively associated with SOEFP. The results shows that HC has insignificant impact on SOEFP ($\beta=0.046$; S.E 0.055 $p=0.346$). Hence our H1a is not supported. H1b of the study states that HC is positively associated with SOENFP. The results shows that HC has significant impact on SOENFP ($\beta=0.058$; S.E 0.051 $p=0.180$). Thus, our H1ba is supported.

H2a states that CC is positively associated with SOEFP. The results shows that CC has insignificant impact on SOEFP ($\beta=0.117$; S.E 0.092 $p=0.208$). Hence our H2a is not supported. H2b of the study states that CC is positively associated with SOENFP. The results shows that CC has insignificant impact on SOENFP ($\beta= -0.095$; S.E 0.092 $p=0.248$). Thus, our H2b is not supported. H3a states that SC is positively associated with SOEFP. The results shows that SC has insignificant impact on SOEFP ($\beta= -0.133$; S.E 0.133 $p=0.273$). Hence our H3a is not supported. H3b of the study states that SC is positively associated with SOENFP. The results shows that SC has insignificant impact on SOENFP ($\beta= -0.042$; S.E 0.096 $p=0.595$). Thus, our H3b is not supported.

H4a states that IC is positively associated with SOEFP. The results shows that IC has insignificant impact on SOEFP ($\beta= -0.235$; S.E 0.191 $p=0.162$). Hence our H4a is not supported. H4b of the study states that IC is positively associated with SOENFP. The results shows that IC has positive impact on SOENFP ($\beta= 0.112$; S.E 0.122 $p=0.485$). Thus, our H4b is also not supported.

H5a states that ID is positively associated with SOEFP. The results shows that ID has insignificant impact on SOEFP ($\beta= -0.186$; S.E 0.189 $p=0.286$). Hence our H5a is not supported. H5b of the study states that ID is positively associated with SOENFP. The

results shows that ID has no significant impact on SOENFP ($\beta = 0.062$; S.E 0.111 $p = 0.776$). Thus, our H5b is not supported.

H6a states that MBS is positively associated with SOEFP. The results shows that MBS has insignificant impact on SOEFP ($\beta = 0.024$; S.E 0.062 $p = 0.695$). Hence our H6a is not supported. H6b of the study states that MBS is positively associated with SOENFP. The results shows that MBS has insignificant impact on SOENFP ($\beta = -0.030$; S.E 0.059 $p = 0.748$). Thus, our H6b is not supported.

H7a states that MBM is positively associated with SOEFP. The results shows that MBM has insignificant impact on SOEFP ($\beta = -0.034$; S.E 0.111 $p = 0.927$). Hence our H7a is not supported. H7b of the study states that MBM is positively associated with SOENFP. The results shows that MBM has insignificant impact on SOENFP ($\beta = 0.121$; S.E 0.074 $p = 0.099$). Thus, our H7b is not supported.

H8a states that GD is positively associated with SOEFP. The results shows that GD has significant impact on SOEFP ($\beta = 0.269$; S.E 0.115 $p = 0.013$). Hence our H8a is supported. H8b of the study states that GD is positively associated with SOENFP. The results shows that GD has insignificant impact on SOENFP ($\beta = 0.062$; S.E 0.077 $p = 0.476$). Thus, our H8b is not supported.

H9a states that IOC is positively associated with SOEFP. The results shows that IOC has insignificant impact on SOEFP ($\beta = 0.158$; S.E 0.094 $p = 0.070$). Hence our H9a is not supported. H9b of the study states that IOC is positively associated with SOENFP. The

results shows that IOC has significant impact on SOENFP ($\beta = -0.130$; S.E 0.068 $p=0.049$).

Thus, our H9b is supported.

H10a states that ACM is positively associated with SOEFP. The results shows that ACM has insignificant impact on SOEFP ($\beta = 0.023$; S.E 0.080 $p=0.774$). Hence our H10a is not supported. H10b of the study states that ACM is positively associated with SOENFP. The results shows that ACM has insignificant impact on SOENFP ($\beta = -0.057$; S.E 0.056 $p=0.330$). Thus, our H10b is not supported.

Hypothesis (H11a) states that GI is playing moderating role between HC and SOEFP. Results shows that GI has no moderating effect on the relationship between HC and SOEFP ($\beta=0.004$; S.E 0.053 $p=0.967$). Hypothesis (H11b) states that GI is playing moderating role between HC and SOENFP. Results shows that GI has no moderating effect on the relationship between HC and SOENFP ($\beta = -0.066$; S.E 0.055 $p=0.109$).

Hypothesis (H12a) states that GI is playing moderating role between CC and SOEFP. Results shows that GI has no moderating effect on the relationship between CC and SOEFP ($\beta = -0.006$; S.E 0.100 $p=0.736$). Hypothesis (H12b) states that GI is playing moderating role between CC and SOENFP. Results shows that GI has no moderating effect on the relationship between CC and SOENFP ($\beta=-0.159$; S.E 0.109 $p=0.101$)

Hypothesis (H13a) states that GI is playing moderating role between SC and SOEFP. Results shows that GI has no moderating effect on the relationship between SC and SOEFP ($\beta=-0.008$; S.E 0.150 $p=0.904$). Hypothesis (H13b) states that GI is playing moderating

role between SC and SOENFP. Results shows that GI has no moderating effect on the relationship between SC and SOENFP ($\beta=0.138$; S.E 0.162 $p=0.360$)

Hypothesis (H14a) states that GI is playing moderating role between IC and SOEFP. Results shows that GI has no moderating effect on the relationship between IC and SOEFP ($\beta= -0.154$; S.E 0.183 $p=0.277$).

Hypothesis (H14b) states that GI is playing moderating role between IC and SOENFP. Results shows that GI has moderating effect on the relationship between IC and SOENFP ($\beta=-0.427$; S.E 0.159 $p=0.003$).

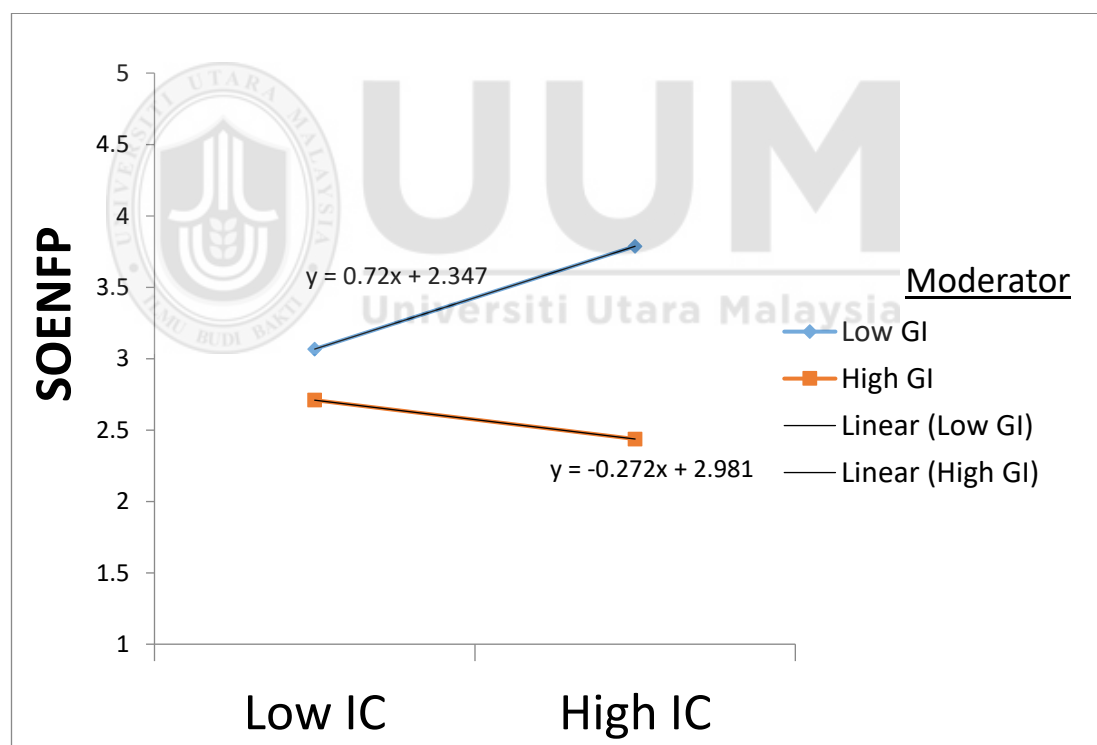


Figure 4.6 Moderation effect

Hypothesis (H15a) states that GI is playing moderating role between ID and SOEFP. Results shows that GI has no moderating effect on the relationship between ID and SOEFP ($\beta= -0.138$; S.E 0.175 $p=0.240$). Hypothesis (H15b) states that GI is playing moderating

role between ID and SOENFP. Results shows that GI has no moderating effect on the relationship between ID and SOENFP ($\beta = -0.248$; S.E 0.181 $p=0.074$).

Hypothesis (H16a) states that GI is playing moderating role between MBS and SOEFP. Results shows that GI has no moderating effect on the relationship between MBS and SOEFP ($\beta=0.026$; S.E 0.066 $p=0.602$). Hypothesis (H16b) states that GI is playing moderating role between MBS and SOENFP. Results shows that GI has no moderating effect on the relationship between MBS and SOENFP ($\beta = -0.038$; S.E 0.071 $p=0.497$)

Hypothesis (H17a) states that GI is playing moderating role between MBM and SOEFP. Results shows that GI has no moderating effect on the relationship between MBM and SOEFP ($\beta = -0.129$; S.E 0.155 $p=0.444$). Hypothesis (H17b) states that GI is playing moderating role between MBM and SOENFP. Results shows that GI has no moderating effect on the relationship between MBM and SOENFP ($\beta = -0.110$; S.E 0.177 $p=0.327$)

Hypothesis (H18a) states that GI is playing moderating role between GD and SOEFP. Results shows that GI has no moderating effect on the relationship between GD and SOEFP ($\beta = -0.087$; S.E 0.150 $p=0.534$). Hypothesis (H18b) states that GI is playing moderating role between GD and SOENFP. Results shows that GI has no moderating effect on the relationship between GD and SOENFP ($\beta = -0.045$; S.E 0.109 $p=0.593$).

Hypothesis (H19a) states that GI is playing moderating role between IOC and SOEFP. Results shows that GI has no moderating effect on the relationship between IOC and SOEFP ($\beta=0.122$; S.E 0.120 $p=0.443$). Hypothesis (H19b) states that GI is playing

moderating role between IOC and SOENFP. Results shows that GI has no moderating effect on the relationship between IOC and SOENFP ($\beta=0.126$; S.E 0.096 $p=0.241$).

Hypothesis (H20a) states that GI is playing moderating role between ACM and SOEFP. Results shows that GI has no moderating effect on the relationship between ACM and SOEFP ($\beta= -0.111$; S.E 0.072 $p=0.113$). Hypothesis (H20b) states that GI is playing moderating role between ACM and SOENFP. Results shows that GI has no moderating effect on the relationship between ACM and SOENFP ($\beta= -0.052$; S.E 0.074 $p=0.343$).

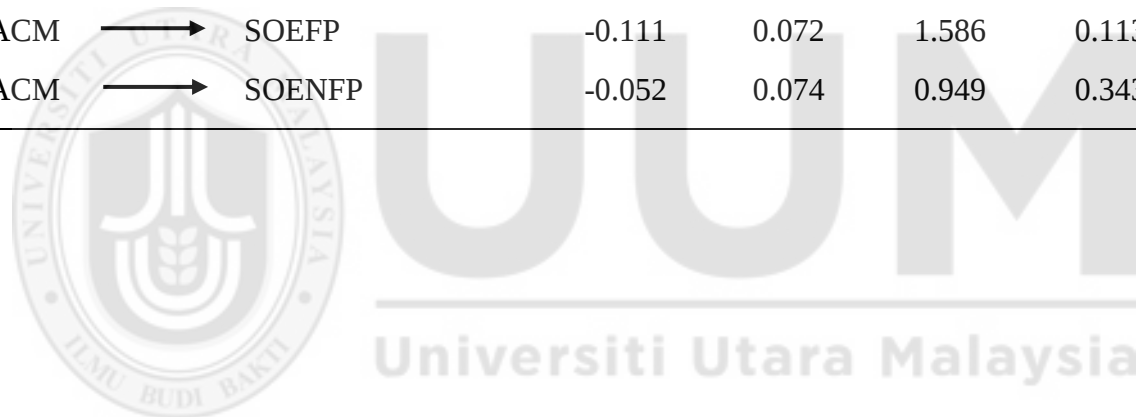


TABLE 4.10**Structural Model Assessment**

Hypothesis	Relationship			Beta	S.E	T	P	Supported
H1a	HC	→	SOEFP	0.046	0.055	0.942	0.346	No
H1b	HC	→	SOENFP	0.058	0.051	1.340	0.180	No
H2a	CC	→	SOEFP	0.117	0.092	1.259	0.208	No
H2b	CC	→	SOENFP	-0.095	0.092	1.156	0.248	No
H3a	SC	→	SOEFP	-0.133	0.133	1.097	0.273	No
H3b	SC	→	SOENFP	-0.042	0.096	0.532	0.595	No
H4a	IC	→	SOEFP	-0.235	0.191	1.398	0.162	No
H4b	IC	→	SOENFP	0.112	0.122	0.698	0.485	No
H5a	ID	→	SOEFP	-0.186	0.189	1.066	0.286	No
H5b	ID	→	SOENFP	0.062	0.111	0.285	0.776	No
H6a	MBS	→	SOEFP	0.024	0.062	0.393	0.695	No
H6b	MBS	→	SOENFP	-0.030	0.059	0.321	0.748	No
H7a	MBM	→	SOEFP	-0.034	0.111	0.092	0.927	No
H7b	MBM	→	SOENFP	0.121	0.074	1.652	0.099	No
H8a	GD	→	SOEFP	0.269	0.115	2.483	0.013	Yes

H8b	GD	→	SOENFP	0.062	0.077	0.713	0.476	No
H9a	IOC	→	SOEFP	0.158	0.094	1.812	0.070	No
H9b	IOC	→	SOENFP	-0.130	0.068	1.972	0.049	Yes
H10a	ACM	→	SOEFP	0.023	0.080	0.287	0.774	No
H10b	ACM	→	SOENFP	-0.057	0.056	0.975	0.330	No
H11a	GI x HC	→	SOEFP	0.004	0.053	0.041	0.967	No
H11b	GI x HC	→	SOENFP	-0.066	0.055	1.604	0.109	No
H12a	GI x CC	→	SOEFP	-0.006	0.100	0.338	0.736	No
H12b	GI x CC	→	SOENFP	0.159	0.109	1.638	0.101	No
H13a	GI x SC	→	SOEFP	0.008	0.150	0.121	0.904	No
H13b	GI x SC	→	SOENFP	0.138	0.162	0.916	0.360	No
H14a	GI x IC	→	SOEFP	-0.154	0.183	1.086	0.277	No
H14b	GI x IC	→	SOENFP	-0.427	0.159	2.932	0.003	Yes
H15a	GI x ID	→	SOEFP	-0.138	0.175	1.174	0.240	No
H15b	GI x ID	→	SOENFP	-0.248	0.181	1.790	0.074	No
H16a	GI x MBS	→	SOEFP	0.026	0.066	0.522	0.602	No
H16b	GI x MBS	→	SOENFP	-0.038	0.071	0.679	0.497	No
H17a	GI x MBM	→	SOEFP	-0.129	0.155	0.766	0.444	No

H17b	GI x MBM	→	SOENFP	-0.110	0.117	0.980	0.327	No
H18a	GI x GD	→	SOEFP	-0.087	0.150	0.622	0.534	No
H18b	GI x GD	→	SOENFP	-0.045	0.109	0.535	0.593	No
H19a	GI x IOC	→	SOEFP	0.122	0.120	0.767	0.443	No
H19b	GI x IOC	→	SOENFP	0.126	0.096	1.174	0.241	No
H20a	GI x ACM	→	SOEFP	-0.111	0.072	1.586	0.113	No
H20b	GI x ACM	→	SOENFP	-0.052	0.074	0.949	0.343	No



4.7.1 Assessment of (R^2)

PLS-SEM structural model assessment endorses alternative important criteria that is R-Square (R^2) value assessment Hair et al. (2012) and Reinartz et al. (2009) describes that coefficient of determination known as R^2 . Many scholars have stated that R^2 represents the proportion of variation in the dependent variable(s) that can be explained by one or more predictor variable(s) (Hair et al., 2012; Henseler et al., 2012; Xu et al., 2019). Acceptability level of R^2 value according to hair et al 2010 is dependent upon the framework of the study. Meanwhile, Byrne (2013) provided an suitable value of R^2 that is 0.10. On the other hand, Chin, (1998) suggested benchmark for R^2 was 0.19 as weak, moderator value considered if 0.33 and 0.60 considered substantial value while using PLS-SEM. In Table 4.11 reported the value of R-Square for present research.

TABLE 4. 11

Variance Explained in the Endogenous Latent Variable

Latent Variable	Variance explained (R^2)
Financial Performance	0.518
Non-Financial Performance	0.618

Table 4.11 reported that the research model explained about 51.8% and 61.8% of the total variance in SOEFP & SOENFP respectively. This suggests that eleven exogenous latent variables (HC, SC, CC, IC, ACM, ID, GD, IOC, MBS, MBM and GI collectively explained 51.8% and 61.8% of the variance in SOEFP & SOENFP respectively. Following (Chin, 1998) it could be concluded that the level of variance explained by the proposed model is moderate and substantial respectively.

4.7.2 Assessment of Effect Size (f^2)

If the f^2 values affected by the relative effect of a specific exogenous latent variable on an endogenous latent variable(s) that is known as effect size (Chin, 1998). Chin (1998) introduced the method for empirically computing the effect size. According to him the increase in the value of f^2 of latent variable represents the high effect size as compared to the unexplained variance.

According to Cohen's (1988) guidelines, effect sizes can be classified as strong, moderate, or weak based on f^2 values of 0.35, 0.15, and 0.02, respectively. The effect sizes for the present study were calculated using the above formula and are reported in

TABLE 4. 12

Effect Sizes of the Latent Variables

FINANCIAL PERFORMAN CE	f^2	EFFECT SIZE RATING	NON- FINANCIAL PERFORMANC E	f^2	EFFECT SIZE RATING
HC	0.003	WEAK	HC	0.012	WEAK
CC	0.008	WEAK	CC	0.019	WEAK
IC	0.013	WEAK	IC	0.082	WEAK
SC	0.012	WEAK	SC	0.000	WEAK
ACM	0.004	WEAK	ACM	0.004	WEAK
ID	0.006	WEAK	ID	0.043	WEAK
MBM	0.000	WEAK	MBM	0.022	WEAK
MBS	0.000	WEAK	MBS	0.007	WEAK
IOC	0.019	WEAK	IOC	0.022	WEAK
GD	0.080	WEAK	GD	0.001	WEAK
GI	0.051	WEAK	GI	0.484	STRON G

4.7.3 Assessment of Predictive Relevance

The present study applied Stone-Geisser test to check the predictive relevance of the present research model by using the blindfolding procedure (Geisser, 1974; Stone, 1974).

In PLS-SEM, to check the GoF by applying the Stone-Gesser test of predictive relevance

as a supplementary test (Duarte & Raposo, 2010). Sattler et al. (2010) stated that the blindfolding procedure should only be used on endogenous latent variables that have a reflective measurement model operationalization. McMillan and Conner (2003) defined a reflective measurement model, an unobservable concept (i.e., latent variable) is believed to cause variation in a set of observable indicators. The current research model employs a reflective measurement model, where blindfolding procedure is applied to endogenous latent variables.

The blindfolding procedure is used to analyse the predictive relevance of the model by calculating the Q^2 value, which is a measure of cross-validated redundancy. The Q^2 measure is used to assess the predictive relevance of the model by evaluating the difference between the predictive ability of the model and the predictive ability of a random model. It is a commonly used method to assess the validity of the structural model in PLS-SEM analysis (Chin, 1998; Geisser, 1974; Hair et al., 2012; Ringle et al., 2012). Q^2 used as a benchmark to analyse the omitted cases in the dataset of the current study (hair et al 2014 and chin 1998). As stated by Henseler et al. (2012) that to find out the predictive relevance in the model, analyse the values of Q^2 . If the values of Q^2 is greater than zero (0) it means predictive relevance exist in the model by (Chin, 1998; Henseler et al., 2012). The results of cross-validated redundancy Q^2 provides in below mention Table 4.13

TABLE 4.13

Predictive Relevance

Financial Performance	q^2	Effect Size Rating	Non-Financial Performance	q^2	Effect Size Rating
FP1	0.279	Moderate	NFP2	0.282	Moderate

FP2	0.231	Moderate	NFP3	0.430	Strong
FP3	0.243	Moderate	NFP4	0.213	Moderate
FP4	0.227	Moderate	NFP5	0.318	Moderate
FP5	0.170	Moderate			

Table 4.13 indicates that the proposed model has predictive relevance, as the Q2 values are greater than zero for all endogenous constructs. In addition to evaluating the model's fitness, reliability, validity, and effect size, the present study also utilized the Q2 measure as a cross-validated redundancy measure to assess the model's predictive relevance. The results of the study provide robust evidence in favour of the proposed hypotheses and the underlying theoretical framework.

4.6.5 Assessment of nonlinear effects

To test for potential nonlinearities in the structural model relationships, followed Svensson et al. (2018). Firstly used Ramsey's (1969) RESET on the latent variable scores extracted after the convergence of the original model's PLS-SEM algorithm. The results of bootstrapping with 5000 samples indicate that neither of the nonlinear effects is significant as mentioned in Table 4.14. Therefore conclude that the linear effects model is robust.

TABLE 4.14

Non-linear Ramsey Test

Constructs	Original sample (O)	P values
QE (Chen et al.) -> FP	-0.023	0.528
QE (Chen et al.) -> NFP	-0.061	0.049
QE (ID) -> FP	-0.080	0.393
QE (ID) -> NFP	-0.069	0.309
QE (MBS) -> FP	0.023	0.509
QE (MBS) -> NFP	-0.006	0.832
QE (ACM) -> FP	0.055	0.218
QE (ACM) -> NFP	0.040	0.496
QE (GD) -> FP	0.133	0.137
QE (GD) -> NFP	-0.023	0.699
QE (IOC) -> FP	0.015	0.810

QE (IOC) -> NFP	0.018	0.734
QE (MBM) -> FP	0.010	0.881
QE (MBM) -> NFP	-0.096	0.102
QE (GI) -> NFP	-0.150	0.180
QE (SC) -> NFP	-0.037	0.638
QE (IC) -> FP	0.092	0.251
QE (IC) -> NFP	0.073	0.202
QE (CC) -> FP	-0.049	0.590
QE (CC) -> NFP	0.097	0.307

4.6.6 Endogeneity Gaussian Copula

In this study, the potential endogeneity was assessed following Hult et al.'s (2018) systematic procedure, which began with the application of Park and Gupta's (2012) Gaussian copula approach, using the latent variable scores obtained from the original model estimation as input. Firstly verify if the variables, which potentially exhibit endogeneity, are normally distributed. For that reason running the skewness and kurtosis on the latent variable scores of HC, SC, CC, IC, IOC, GD, MBM, MBS, ID, GI, and ACM which serve as independent variables in the PLS path model's partial regressions. The results showed in appendix B that none of the Gaussian copulas (i.e. HC, SC, CC, IC, IOC, GD, MBM, MBS, ID, GI, and ACM) is significant (p value > 0.05). Specifically, considering FP and NFP 11 predictor constructs as potentially endogenous yields non-significant copulas showed in Table 4.15. Note that during this research also checked all other combinations of Gaussian copulas included in the model and none is significant (appendix B). Based on the application of Park and Gupta's Gaussian copula approach, using the latent variable scores of the original model estimation as input, it is concluded that endogeneity is not present in this study. This finding supports the robustness of the structural model results with regard to endogeneity (Hult et al., 2018).

Table 4.15**Gaussian Copula**

Constructs	Original sample (O)	P values
GC (Chen et al.) -> FP	-0.033	0.847
GC (Chen et al.) -> NFP	-0.205	0.252
GC (ID) -> FP	1.045	0.235
GC (ID) -> NFP	0.240	0.739
GC (MBS) -> FP	-0.086	0.551
GC (MBS) -> NFP	0.128	0.363
GC (ACM) -> FP	0.065	0.318
GC (ACM) -> NFP	0.046	0.491
GC (GD) -> FP	-0.064	0.665
GC (GD) -> NFP	-0.157	0.229
GC (IOC) -> FP	0.066	0.522
GC (IOC) -> NFP	0.150	0.080
GC (MBM) -> FP	-0.616	0.346
GC (MBM) -> NFP	0.475	0.362
GC (GI) -> FP	-0.044	0.716
GC (GI) -> NFP	-0.048	0.600
GC (SC) -> FP	-0.754	0.261
GC (SC) -> NFP	-0.810	0.182
GC (IC) -> FP	0.111	0.380
GC (IC) -> NFP	0.007	0.939
GC (CC) -> FP	0.177	0.123
GC (CC) -> NFP	0.079	0.359

4.6.7 Assessment of unobserved heterogeneity

To identify and treat unobserved heterogeneity in PLS path models, Sarstedt et al. (2017b) proposed a systematic procedure. In this research, this procedure was followed, and the FIMIX-PLS procedure was applied to the data. To start the FIMIX-PLS procedure, the researcher assumed a one-segment solution, which is the default setting for the initial step of the process (Matthews et al., 2016). The researcher initiated the FIMIX-PLS procedure by assuming a one-segment solution and using the default settings for the stop criterion ($10^{-10}=1.0E-10$), the maximum number of iterations (5000), and the number of repetitions (10), following Matthews et al. (2016). To determine the maximum number of segments

to extract, the minimum sample size required to estimate each segment was computed, as recommended by Sarstedt et al. (2017b).

The post hoc power analysis was conducted to determine the minimum sample size required to estimate each segment based on an assumed effect size of 0.15 and a power level of 80%. The analysis suggested a minimum sample size requirement of 55, which allowed for extracting a maximum of three segments. Therefore, the researcher re-ran the FIMIX-PLS procedure for one to three segments with the same settings as the initial analysis. However, the fit indices for the one to three-segment solutions were inconclusive, as shown in (Table 4.16).

The researchers used AIC3 and CAIC to determine the appropriate number of segments in the FIMIX-PLS procedure, as recommended by (Sarstedt et al., 2011). However, the results showed that AIC3 suggested a three-segment solution, while CAIC pointed to a two-segment solution. To further assess the appropriate number of segments, the researchers also considered AIC4 and Bayesian information criteria (Babic), which have been shown to perform well in such cases. The results from the AIC4 and BIC criteria indicate that a two-segment solution is appropriate, and this solution is also densely clustered according to the EN criterion (Hair et al., 2016). Additionally, the minimum sample size requirements for each segment are met in the two-segment solution (Table 4.17). However, the MDL5 criterion also points to a two-segment solution, creating some ambiguity in the results. According to Hair et al. (2016), the MDL5 criterion has a tendency to underestimate the number of segments in FIMIX-PLS, and therefore researchers should extract more segments than suggested by MDL5. Overall, the analyses do not provide a clear indication of a specific segmentation solution. This is due to the fact that AIC3 and

CAIC suggest different segment numbers and MDL5 tends to underestimate the number of segments. Additionally, AIC4 and BIC indicate the same number of segments as MDL5 in Table 4.16. Therefore, it is necessary to carefully consider and weigh the results of each criterion in order to determine the most appropriate segmentation solution.

Therefore, it can be assumed that unobserved heterogeneity is not at a critical level, which further supports the results of the entire data set's analysis as presented in Appendix C.

Table 4.16

Fit indices for the one- to three-segment solutions

Criteria	Segment 1	Segment 2	Segment 3
AIC (Akaike's information criterion)	2125.774	1786.923	1739.471
AIC3 (modified AIC with Factor 3)	2161.774	1859.923	1849.471
AIC4 (modified AIC with Factor 4)	2197.774	1932.923	1959.471
BIC (Bayesian information criterion)	2240.72	2020.009	2090.696
CAIC (consistent AIC)	2276.72	2093.009	2200.696
HQ (Hannan-Quinn criterion)	2172.379	1881.430	1881.878
MDL5 (minimum description length with factor 5)	2988.506	3536.353	4375.597
LnL (LogLikelihood)	-1026.887	-820.462	-759.736
EN (normed entropy statistic)	0	0.965	0.88
NFI (non-fuzzy index)	0	0.975	0.888
NEC (normalized entropy criterion)	0.000	6.227	21.658

Table 4.17

Relative segment sizes

No of Segments	Segment 1	Segment 2	Segment 3
1	1.000		
2	0.733	0.267	
3	0.570	0.228	0.203

4.8 Summary

In this chapter, the findings of the data analysis conducted using SmartPLS are presented. The data was collected from top management of SOEs, and its quality and appropriateness for testing the proposed hypotheses were evaluated. Prior to conducting the analysis, preliminary data analysis was performed to confirm the suitability of the data for further analysis. The data was then analysed using SmartPLS. A two-step approach was employed to analyse the data, as suggested by previous research. The initial stage of the analysis involved evaluating the measurement model, followed by analysing the structural model. The findings of the measurement model indicated that the measurements were reliable and had acceptable levels of convergent and discriminant validity. The proposed hypotheses were tested using a structural model, which revealed that there was no significant impact of HC, SC, CC, IC, ACM, ID, MBM, and MBS on SOEFP and SOENFP. It is found that IOC has significant impact on SOENFP but insignificant impact with SOEFP. It is also analysed that GD has significant influence on SOEFP but insignificant effect with SOENFP. Further, the results show that there is no moderating role of GIs between the proposed relationships of the study except GI has significant moderating role on IC with SOENFP. Chapter 5 will provide an in-depth discussion of the study's findings, drawing on previous literature, theory, and practical perspectives. The chapter will analyse the practical implications of the results, offer recommendations for future research, and draw conclusions based on the outcomes of the study.

CHAPTER FIVE

DISCUSSION AND RECOMMENDATIONS

5.0 Introductions

This chapter of the thesis have several sections. First, it summarizes the main findings of the study. Then, it discusses how these results relate to previous research and relevant theories. After that, it outlines the implications of the study's findings for policymakers. Next, it highlights the limitations of the study and provide recommendations for future research and policy. Finally, it concludes by summarizing the chapter's contents.

5.1 Summary of Results

This thesis seeks to explore, through empirical means, the various factors that influence SOEFP & SOENFP. It also examines the impact of HC, SC, CC, IC, ID, GD, MBS, MBM, ACM and IOC on both SOEFP & SOENFP. Additionally, current study evaluates the moderating effect of GI impacts the relationship between HC, SC, CC, IC, ID, GD, MBS, MBM, ACM, IOC and performance of SOEs respectively.

The current research aims to address the research questions by gathering data from the top management of SOEs in Pakistan. The sample comprised of 202 respondents who completed a survey questionnaire. Out of these, 188 respondents filled out the questionnaire, resulting in a response rate of 93 percent. Preliminary data analysis shows 180 responses were considered suitable for further analysis. SMART- PLS 4 was used to analyse the data, a widely used software for multivariate analysis.

The findings of the analysis indicate that measurement model has established an acceptable level of scales reliability & validity. The structural model results showed that insignificant impact of HC, SC, CC, IC, ACM, ID, MBM and MBS on SOEFP & SOENFP. It is found that IOC has significant impact on SOENFP but insignificant impact with SOEFP. It is also analysed that GD has significant influence on SOEFP but insignificant effect with SOENFP. Further, the results demonstrates that GI has no moderating impact between the proposed relationships of the study except relationship of IC with SOENFP. The detailed discussion of each hypothesis is explained in next section.

5.2 Discussion on Key Findings

This part of thesis focuses on discussion on the relationships of HC, SC, CC, IC, ID, GD, MBS, MBM, ACM and IOC with SOEFP & SOENFP. Moreover, this part of thesis explained the moderating effect of GI between the relationships of HC, SC, CC, IC, ID, GD, MBS, MBM, ACM, IOC and performance of SOEFP & SOENFP respectively.

The descriptive analysis of the study revealed that 80.56% of the respondents were male, while 19.44% were female. Furthermore, the majority of respondents has age above 35years of age and held the position of CEO in SOEs. The majority of respondents also held a master's degree. In terms of the constructs studied, SOEFP and SOENFP were found to be inclined towards the highest level. It's worth noting that the respondents were all top management members of their respective SOEs. The following section will discuss these findings in relation to existing literature and theory

5.2.1 Intellectual Capital and SOEs Financial and Non-Financial Performance

To accomplish the first objective of current study that ambitions to investigate how INC (HC, CC, SC, and IC) affects SOEFP and SOENFP. This study proposed eight hypothesis (H1a, H1b, H2a, H2b, H3a, H3b, H4a and H4b). The path coefficients and bootstrapping in Smart PLS 4 were examined to analyse the proposed relationship. The results given in Table 4.10, reveals that eight hypothesis were found insignificant (H1a, H1b, H2a, H2b, H3a, H3b, H4a and H4b). The hypothesis H1a states that HC is positively associated with SOEFP. The results of the study did not support the H1a. The findings of this study contradict the results of previous studies (Clarke et al., 2011; Kamukama et al., 2010; Smaguc, 2021) that have reported a positive relationship between HC and firm performance.

One possible explanation for the lack of positive association between HC and SOEFP could be that having a higher number of employees does not necessarily translate to better performance outcomes. It is possible that having too many employees could lead to coordination challenges, communication breakdowns, and inefficiencies, which could ultimately hurt SOEFP. Another factor that could explain the lack of positive association between HC and SOEFP is the quality of human capital. Simply having more employees does not guarantee that they are highly skilled or motivated, which are both critical factors for achieving high performance outcomes. It is also possible that the lack of positive association between HC and SOEFP is due to the specific context of SOEs. For example, in some SOEs, the government may mandate that a certain number of people be hired, regardless of whether they are needed or not. This could lead to inflated HC numbers that do not necessarily translate to better SOEFP (Campbell et al., 2012; Hejazi et al., 2016; Wang et al., 2018). Overall, the lack of positive association between HC and SOEFP

underscores the importance of focusing on quality over quantity when it comes to human capital. It also suggests that SOEs should carefully consider the optimal number of employees needed to achieve their performance objectives.

The second hypothesis of the study H1b is not supported by the findings of the study. In any organization, HC is considered as an integral part due to many factors that attached with that personal just like his seriousness towards job and life, old experiences, his talent, and his personal attitude (Hudson, 1993; Moon & Kym, 2006). On the other hand, for organizational viewpoint, it is important that HC is well enriched with skills, knowledge, and personal attitude to perform the assign task (Hitt et al., 2001). HC is the source for organization to utilize them in a best way and maximize organizations profit and earnings (Khalique et al., 2013; Tamura, 2006; Young, 2006). Meanwhile, organizational worth based upon their efficient personals who work for the organization growth (Schlesinger & Zornitsky, 1991). The credit goes to employers who manage these human personals and utilize their expertise to uplift the profit any organization. Along with this, SOEs must play a dual role which is the satisfaction of customers. It is the ultimate objective of the organization to provide quality service through better HC (Hartline & Ferrell, 1996; Wong & Kuvaas, 2018). It is a very clear relationship that exists between HC and satisfaction of customer (Eklof et al., 2020; Fornell et al., 2006; Fornell et al., 2016; Taillon & Huhmann, 2019). Customer satisfaction played a vital role in the performance of business entities. Meanwhile, it will generate more profitability and in return they earned financial rewards that are the ultimate beneficiary is HC (Ping Jr, 1993).

Similarly, CC also has no influences on SOEFP. The results of the study not supported the H2a. This is because, through the adoption of latest strategies and use of different

techniques provide the services to the customer in a unique way in comparison with your competitors. It is stated that when employees of your organization is happy due to healthy environment try to make customers happier too (Ersoy & Ehtiyar, 2017; Frey, 2020; Warr & Clapperton, 2010). Through providing the balanced work life for employees enhance the confidence of the customer. Customers satisfaction impact and improve the flow of assessment, recruitment, productivity, retention and engagement (Sheth et al., 2011). In this flow last two are relevant to customers and employees.

Further the results indicate that CC has no influence on SOENFP. This implies that there is no direct relationship between CC and the SOENFP. However, this statement needs to be analysed further to understand the factors that may influence the relationship between customer capital and SOE non-financial performance. On the one hand, it could be argued that state-owned enterprises may not prioritize customer capital as a key factor in driving their non-financial performance (Cegarra-Navarro & Sánchez-Polo, 2008a; Cegarra-Navarro & Sánchez-Polo, 2008b). This is because, as government entities, they may not be as motivated to generate profits and compete with other companies in the same way that privately-owned companies are. Additionally, SOEs may have other priorities such as fulfilling their social and political mandates, which could take precedence over customer satisfaction.

On the other hand, it is also possible that the relationship between customer capital and SOE non-financial performance may be influenced by factors such as the industry in which the SOE operates, the level of competition it faces, and the extent to which it has been deregulated. For example, SOEs operating in industries with high barriers to entry may not feel the need to invest heavily in building customer capital since they

may not face significant competition. Similarly, SOEs in heavily regulated industries may not be able to leverage their customer capital to achieve better non-financial performance if they are constrained by regulatory requirements (Hariyati et al., 2019). In conclusion, while it is possible that there may not be a direct relationship between customer capital and SOE non-financial performance, this statement needs to be further analysed in the context of factors such as industry dynamics, regulatory constraints, and the priorities of state-owned enterprises.

Similarly, the SC is not positively associated with SOEFP. The results does not validate the H3a. This implies that there is no direct relationship between the intangible assets of an SOE and its financial performance. However, it is important to examine this statement in more detail and consider the factors that may influence the relationship between SC and SOEFP. On the one hand, it could be argued that SOEs may not prioritize the development of their structural capital as a means of enhancing their financial performance (Hejazi et al., 2016; Karagiannis et al., 2008). This is because, as government entities, they may not be as focused on generating profits as privately-owned companies are. Additionally, SOEs may face other constraints, such as political interference and bureaucracy that can limit their ability to invest in and optimize their structural capital.

It is also possible that the association between SC and SOEFP is effected by factors such as the industry in which the SOE operates, the competitive landscape it faces, and the level of innovation in the market. For example, SOEs operating in highly regulated industries may not have the freedom to invest in and optimize their structural capital in the same way as companies in less regulated industries (Aramburu & Sáenz,

2011; Hejazi et al., 2016; Zangoueinezhad & Moshabaki, 2009). Similarly, SOEs that operate in highly competitive markets may need to invest heavily in structural capital in order to remain competitive.

There may not be a direct relationship between structural capital and SOE financial performance, this statement needs to be further analysed in the context of factors such as industry dynamics, regulatory constraints, and the priorities of state-owned enterprises. Factors such as political interference, bureaucracy, and the level of competition in the market can also influence the relationship between SC and SOEFP. Moreover, the findings of this research did not provide the significance of SC on SOENFP. The results did not support the H3b. Organizations are relying on both tangible and intangible resources. With the current advancement of technology as well as the enhancement of a Knowledge Economy, more organizations are giving more attention towards the utilization of intangible resources. Decades ago, organizations are only acknowledging patents, copyrights and goodwill in their financial statements. SC are those capital that shaped the organizations. SC consist of the guidelines, technology, business process and models, and rules which managed carefully lead the organization into superior performance. SC binds together all the other capitals to the organizations through the philosophy, mission and vision of the organizations. Relational capital is whereby the organizations is fully utilizing the external and internal relationship of the organizations that can contribute to the performance be it financially or non-financially. Finally, the CC is whereby the organizations utilize the brand name, intellectual property and trademark that will increase the effectiveness of firms. The value of the CC utilization to the organizations is translated in the customers' loyalty towards the organizations. Similarly, Firer and Williams (2003) confirms the findings of current research.

The hypothesis H4a states that IC is positively associated with SOEFP. The results did not support the H4a. The results state that there is no direct relationship between a state-owned enterprise's innovation capabilities and its financial performance. However, this statement needs to be further examined to understand the factors that may influence the relationship between innovation capability and SOE financial performance. On the one hand, it could be argued that SOEs may not prioritize innovation as a key factor in driving their financial performance. This is because, as government entities, they may have other priorities such as fulfilling their social and political mandates (Delgado-Verde et al., 2011; Fan & Lee, 2016). Additionally, SOEs may face bureaucratic and political constraints that can limit their ability to innovate and develop new products and services.

It is also possible that the impact of IC with SOEFP may be stimulus by factors such as the industry in which the SOE operates, the level of competition it faces, and the regulatory environment in which it operates. For example, SOEs operating in industries with high levels of competition may need to invest heavily in innovation in order to remain competitive. Similarly, SOEs that operate in highly regulated industries may need to innovate in order to comply with regulatory requirements.

Although the IC has no influence on the NFP of the firms but the findings of this study provide evident that IC is positively associated with SOENFP. The results of the study not support the H4b. In the service firm, IC influences SOENFP (Al-kalouti et al., 2020). It is crucial for businesses to address key challenges anticipated by the changes in socioeconomic and environmental issues. IC is largely seen as a vital source for generating sustainable competitive advantage. Due to advancement in market, organizations adopt the

innovative idea (Rajapathirana & Hui, 2018; Slater et al., 2010) that are more embedded with all their structure, strategies and systems that enhance the IC of that organization (Gloet & Samson, 2016).

Over the decades, researchers are digging out the relationship between IC and performance of firm. Scholars tried to analyse different dimensions of FP and NFP indicators that inspect the performance (Rajapathirana & Hui, 2018; Rehman et al., 2019). These dimensions may be objective in nature, and it may be subjective. As suggested by Yıldız et al. (2014) examine the relationship of innovation and business performance and find out positive effect. Meanwhile, as per guidance Oke et al. (2007) that innovation in term of incremental or radical in both cases contributing in the performance of organization.

5.2.2 Impact of Corporate Governance on SOEs Financial and Non-Financial Performance

The second objective of this thesis is to analyse the influence of CG (ID, MBS, MBM, GD, IOC, and ACM) on SOEFP & SOENFP. This study proposed twelve hypothesis (H5a, H5b, H6a, H6b, H7a, H7b, H8a, H8b, H9a, H9b, H10a, and H10b) to achieve the second objective of the study. The path coefficients and bootstrapping in Smart PLS 4 were examined to analyse the proposed relationship. The results given in Table 4.10, supported two relationships (H8a and H9b) while ten hypothesis were found insignificant (H5a, H5b, H6a, H6b, H7a, H7b, H8b, H9a, H10a, and H10b).

The hypothesis H5a states that ID is positively associated with SOEFP. The hypothesis H5a is not supported by the finding of the study. Same results were also described by the Kumar and Singh (2012). According to them ID have no significant impact on the FP.

However, the study of Bhagat and Bolton (2008) found the negative associations between the ID and performance of the firms. In some cases, this affect adversely because it raises conflict of interest, but meanwhile ID has lesser knowledge as compared to inside director (Abubakar, 2016; Dah et al., 2012; Samsi, 2014). The insignificant relationship has been due to the reason that ID on board are not fully aware of the structure and environment of the firm in which they are operating. They have low information as compared to inside directors; hence, they are unable to make decisions which are beneficial for the firms (Hamidah et al., 2017; Mishra & Kapil, 2017).

The hypothesis H5b states that ID is positively associated with SOENFP. The results shows no support of H5b. This states that director of the enterprises are not too much independent and did not serve well to the customers. The main reason for this relationship is that ID on board were very limited in Pakistani firms; therefore, their voice power is low when it comes to most inside directors. Such phenomenon is highlighted in most of the SOEs of Pakistan, a few ID existed on board of Pakistani firms and in most of the cases, the ID were not truly independent, but firms reported them as an independent (Merendino & Melville, 2019; Yasser & Al Mamun, 2015).

The hypothesis H6a states that MBS is positively associated with SOEFP. The results of did not support the H6a. On the other hand the agency theory postulated that there are costs when boards are too large while resource base view theory maintains that larger boards have benefits for corporations by providing access to more external resources. This is since the BOD is a primary mechanism which controls and monitors management behaviour. A board with enough experience and knowledge should ensure board effectiveness. There is no hard and fast rule regarding the size of the board. If

directors are in more numbers that become the challenge for management to ensure the meaningful participation of every director (Jackling & Johl, 2009).

The hypothesis H6b states that MBS is positively associated with SOENFP. The results did not support the H6b. This indicates that MBS is not enough in the enterprises of Pakistan who can perform efficiently to improve the organization NFP. The board that engages in receiving attention of members is doubtless from stakeholders of highly graded institutions. Thus, the business executives' perception are in contour with the literature. Again, Adonu (2016) explain that CG develop a mechanism of improving quality of stakeholders like shareholders, management, employees, suppliers, creditors, government and their agencies, consumers and therefore the public. They contrary point could be management incompetency in showing no interest on non-monetary performance.

The hypothesis H7a is based on positive relationship of MBM and SOEFP outcomes. The finding implies no direct association between the frequency or quality of MBM and the SOEFP. However, this statement needs to be further analysed to understand the factors that may influence the relationship between MBM and SOE financial performance (Musleh Alsartawi, 2019; Vafeas, 1999). Moreover, it could be argued that the frequency or quality of MBM may not be directly related to an SOEFP. This is because the effectiveness of MBM depends on many factors, including the quality of the information presented, the skills and experience of the management team, and the ability of the team to make effective decisions based on the information presented.

Additionally, it is also possible that the relationship between MBM and SOEFP may be influenced by factors such as the level of communication and collaboration among the management team, the alignment of the team's objectives with those of the company, and the ability of the team to make timely and effective decisions. Regular and effective MBM can help ensure that the management team is well-informed about the company's operations and financial performance, and can make informed decisions that can improve the company's financial performance.

The hypothesis H7b is explain the positive association of MBM with non-financial performance of SOE. The results indicate no significant relationship of MBM with SOENFP. However, this statement needs to be further analysed to understand the factors that may influence the relationship between MBM and SOENFP. It is also possible that the relationship between MBM and SOENFP may be influenced by factors such as the level of communication and collaboration among the management team, the alignment of the team's objectives with those of the company, and the ability of the team to make timely and effective decisions (Hoque et al., 2013; Ji et al., 2019; Ntim & Osei, 2011). Regular and effective MBM can help ensure that the management team is well-informed about the company's non-financial performance, and can make informed decisions that can improve the company's non-financial performance.

Furthermore, MBM can provide an opportunity for the management team to discuss and set goals and strategies related to the company's non-financial performance. This can help ensure that the company's non-financial performance is aligned with the company's overall mission and vision.

In conclusion, while it is possible that there may not be a direct relationship between MBM and SOE non-financial performance, the effectiveness of MBM can still play a role in improving an SOE's non-financial performance. Ultimately, the relationship between MBM and SOENFP will depend on a range of factors, including the quality of the management team, the level of communication and collaboration within the team, and the ability of the team to make effective decisions based on the information presented.

The hypothesis H8a about positive relationship of GD and FP of SOEs. The finding support in Pakistani enterprises as only some female directors assault the board (Abdullah & Ku Ismail, 2017; Christiansen et al., 2016; Francoeur et al., 2008; Mirza et al., 2012; Rao & Tilt, 2016; Yarram & Adapa, 2021). Additionally, these females did not own any business-related education and in few cases, they were too young to join the business (as they join the business just after their bachelors).

The hypothesis H8b states that GD is positively associated with SOENFP. The results did not support the H8b. Additionally, Pakistan has male dominant society and females are reluctant to face the clients of the organization. It has been observed in the government enterprises that female remain away from the stakeholders while performing the jobs (Al-Mamun et al., 2013; Dutta & Bose, 2006; Low et al., 2015). Therefore there is no influence of GD in enhancing the SOEFP & SOENFP.

The hypothesis H9a is based on IOC have positively relationship to SOEFP. Moreover, the hypothesis H9a is not supported by the data of the current study. This show that IOC has no significant effect on the FP. The finding are consistent with the study of Hsu and

Petchsakulwong (2010). The IOC is an important factor in ensuring that the committee can operate without undue influence or bias. In the context of State-Owned Enterprises (SOEs), committees such as audit committees or remuneration committees play a key role in overseeing the financial management and governance of the company. SOE financial performance refers to the profitability, revenue growth, return on investment, and other financial metrics of the company.

The statement "IOC is not associated with SOE financial performance" implies that there is no direct relationship between the IOC and the SOEFP. However, this statement needs to be further analysed to understand the factors that may influence the relationship between IOC and SOEFP (Klein, 1998; Lee et al., 2004). On the one hand, it could be argued that the IOC may not be directly related to an SOEFP. This is because the financial performance of an SOE depends on many factors, such as the competitive environment, market conditions, and the economic climate. While IOC can help ensure that financial management and governance practices are transparent and effective, they may not necessarily have a direct impact on the SOEFP.

On the other hand, it is also possible that the association between IOC and SOEFP may be influenced by factors such as the level of oversight and scrutiny provided by IOC, the level of trust and confidence that stakeholders have in the committee's recommendations. IOC can play a key role in identifying and addressing potential financial risks and in ensuring that the company's financial management and governance practices are in line with best practices.

The hypothesis H9b states that IOC has positive association with SOENFP. The results support the hypothesis. The independence of a committee is an important factor in ensuring that the committee can operate without undue influence or bias. In the context of State-Owned Enterprises (SOEs), committees such as sustainability committees or social responsibility committees play a key role in overseeing the non-financial performance of the company. SOENFP refers to the company's social, environmental, and governance impact.

It could be argued that the IOC is directly related to an SOENFP. This is because IOC can help ensure that the company's social, environmental, and governance practices are transparent and effective, and that the company is meeting its broader responsibilities to society and the environment. IOC can provide objective oversight and recommendations, free from undue influence or bias, which can improve the SOENFP (Al Matari et al., 2014; Aldamen et al., 2012; Appleton et al., 2007; McMullen & Raghunandan, 1996).

On the other hand, it is also possible that the relationship between IOC and SOENFP may be influenced by factors such as the quality of the information and recommendations provided by the committees, the level of collaboration and communication with other stakeholders, and the level of implementation of the committee's recommendations. Independent committees may not have a direct impact on the company's non-financial performance if their recommendations are not effectively implemented or if the company is not collaborating effectively with other stakeholders to address broader social and environmental issues.

Furthermore, independent committees can also help enhance the company's reputation and increase stakeholder trust, which can have a positive impact on the company's non-financial performance. Companies that are seen as socially responsible and environmentally conscious may be more attractive to customers, investors, and employees, which can ultimately translate into improved SOENFP.

The hypothesis H10a explain positive association of audit meeting and SOEFP. But the result are not aligned with agency theory and reject hypothesis the agency theory states in frequent number of meeting can helps in achieving highly performance. A practical outcome is that quality of meeting matters not their numbers to increase firm performance (Al Matari et al., 2014; Rebeiz & Salameh, 2006). Several studies (Hoque et al., 2013; Turley & Zaman, 2004) have found that an ACM is a very significant instrument for delivering good governance. Moreover, Mangena and Pike (2005) explained that companies' financial irregularities and failure cannot lodges with ACM commendations. Moreover many studies have found that better working of ACM depend on its expertise and independence in financial matters (Bedard & Johnstone, 2004; Hoque et al., 2013; Krishnan & Ye, 2005). While study of Pakistan shows opposite results due to bureaucratic and political pressures and corruption. Therefore, ACM frequency may be more during the need to make controversial decisions or during financial distress, questionable or illegal activities.

The hypothesis H10b states that ACM is positively associated with SOENFP. The results did not support the H10b. Another possible justification is that ACM are not always fruitful due to the limited time that non-executive directors spend together, which does not necessarily result in sharing the important ideas and suggestions

between themselves as well as with top management. Generally, this scenario acknowledged a natural stemming through the facts that agenda settings for ACM has done by CEO (Sharma et al., 2009; Stewart & Munro, 2007).

5.2.3. Moderating Effect of Government Intervention on Relationship between Intellectual Capital, Corporate Governance and SOEs Financial and Non-Financial Performance

The final objective of this study was to examine whether GI moderates the relationship between INC (HC, CC, SC and IC), CG (ID, MBS, MBM, GD, IOC, and ACM) on SOEFP & SOENFP. Results shown in Table 4.10 indicated that GI is not playing the moderating role between INC, CG and SOEFP & SOENFP except H14b that showed moderating effect between IC and SOENFP, thus providing no support for H11a, H11b, H12a, H12b, H13a, H13b, H14a, H15a, H15b, H16a, H16b, H17a, H17b, H18a, H18b, H19a, H19b, H20a and H20b.

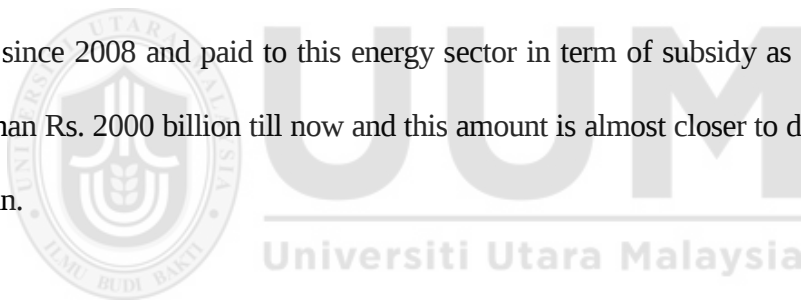
The result indicated that GI does not plays an important role in enhancing the relationship between INC, CG and SOEFP and SOENFP. The results are insignificant because the managers of SOEs did not like the interference of any political government. The other reason is that the many managers of the SOEs are politically appointed therefore, they are not capable of enhancing the performance of the firms. This is the main reason that various SOEs fail to achieve their financial and economic goals that lead to the failure in the performance of the firms. Iftikhar (2015) stated that in Pakistan, there is a chance of government involvement in hiring and firing of board members irrespective of performance by the member; meanwhile there is no reward

policy against their performance, that creates hurdle for SOEs to induct intellectual brain from the local market as well as from international markets. It is quite thinkable that the poor arrangement of administration has contributed to the fiscal crisis by protecting the companies, banks and financial firms from market correction (Dercon, 2007; Jameaba, 2018; Sato, 2005).

It is extensively recognized that Pakistani corporations applied bad governance practices so that Pakistan faced the financial crisis in 2007-08. Protection of minority shareholders, board practices, and transparency and disclosure were poorly applied by some state corporations. After crises, both public and private sectors cooperated with regulators to reinforce their policies regarding CG.

Poor performance of SOEs has severely impacted Pakistan's fiscal landscape by putting additional burden on public exchequer in terms of losses, bailouts and other forms of support by the government. Every year government of Pakistan provide different kind of bailout packages and subsidies to these entities. But these corporations are still unable to generate revenues. Government of Pakistan want to get rid of these SOEs but unfortunately our judicial system creates the blockade against selling out these corporations (Iftikhar, 2015). Due to lack of understanding with economic activities by the courts, most of the time courts issued stay on those reforms. According to Iftikhar (2015), in 2006 Government of Pakistan want to privatize Steel Mill after getting approval from parliament, at that time Rs. 22 billion bid approved but Supreme Court cancel this process by issuing the decision of "omission and commissions". Now no bidder is ready to participate in bidding process and liabilities reached to Rs. 315 billion (Iftikhar, 2015). Pakistan Steel Mill will be able to start its production if government determines to start it from a blank balance sheet.

Democratic governments tried not to go for restructuring in SOEs because downsizing and job insecurity will create panic in the public. These democratic governments avoid the reaction of public and wait for big crisis as done previously in Pakistan International Airlines (Rehman et al.) who had Rs. 32.1 billion accumulated loss in FY 2014 (FY 2015-2016). Meanwhile, Federal government provide grant to Pakistan Railways to meet his employee's expenses that is Rs. 35 billion and this amount is more than the Higher Education Commission's total budget. Federal Government approved Rs. 200 billion developmental loan to National Highway Authority (NHA) during last seven to eight years and it looks that this amount is also unrecoverable (FY 2016-2017). According to (FY 2017-2018) Government of Pakistan invest a lot in Power sector that is around Rs. 1200 billion since 2008 and paid to this energy sector in term of subsidy as tariff differential more than Rs. 2000 billion till now and this amount is almost closer to defence budget of Pakistan.



Federal government as well as individual politicians use SOEs as an instrument to attain their political goals. A group of political actors who work as clientele try to keep this old system rather than to introduce innovative governance system. These clientele use their influences in hiring and firing the employees from these SOEs and showed their power of influence to win their political constituencies. In the National Assembly, Finance Committee take decision regarding the National bank of Pakistan in this relevance aspect: "The Committee discussed the planned merger of Jhang District NBP region with Faisalabad Zone and directed the Senior Vice President of NBP to resolve the issue with the consultation with the parliamentarians belonging to Jhang District". Political leadership derailed the initiatives of SOEs on the topic of

best utilizations of human resources just to protect their political loss. Such as, in 2011 Government of Pakistan regularized the thousands of contractual employees without calculating the financial burden and operational issues that will be faced by different state organizations for instance PIA, PSM and PR (FY 2016-2017). These kind of traditional tack ticks only can be removed through SOEs reforms.

This is a debatable issue that these kind of political decisions that only beneficial for their own political career in short run will affect the whole economy and country have to suffer with huge cost of public exchequers. This issue also faced by developed countries but the citizens of the country and more importantly their leadership stood firm and united against these corrupt practices and introduce transparent governance system as well as operational easiness for the betterment of SOEs.

The GI affects positively on the association of ID and performance of the SOEs but not found significant relationship. These results indicate that to establish a good governance mechanism it is important to appoint ID that take decisions wisely and without any biasness. Their appointment are in line with the agency theory that highlighted that presence of ID in board composition has an impact on the performance of firms. It is important that corporate functions and regulatory functions works separately. Regulatory functions mean memorandum of association, issuing regulations, monitoring and develop policies that will be beneficial for SOEs to generate profit and accelerate their growth. On the other hand, corporate functions include getting relevant information, appoint directors, announcement of fair dividend policy and arrange the finance to achieve the SOEs target. Due to this ID the

The moderating effect of GI on board size and entity performance are not providing any significant result and performance Fan et al. (2014). The bureaucrats in board are not working with firm's interest. Members appointed done according to resource dependency theory.it provide method of dealing with environment. The agency theory deduces the appointments as possibly overthrow to the position of managerial and shareholder interests. Care is clearly noted in creating any appointment of the enterprises board and their appointments (Main & Yu, 2012).

Huge management boards can assistance a corporation from the position of resource requirement (Aras & Crowther, 2009; Mintzberg, 1983). The aim of managing resources in better way improve corporation reliance on board.as increasing number of boards creating problem of communication and coordination.it can decline directors powers and creating agency problems (Klein, 2002; Yawson, 2006; Yermack, 1996).

The board size and its performance also vary in countries (Guest, 2009) . Political issues on huge board rely on different institutional and constitutional environment. Contrary to this Leung et al. (2008) and Main and Yu (2012) states that firm performance can be improve in short run by obtaining political assistance but Kamal (2010) states different thing, political pressure in agency problem and lack of transparency is main problem of SOEs specially faced by Indonesian. Organization cannot work on public interest. They permute their private interest. They hide important information from general public which cause inefficiency of SOEs.

The agency issue is another key factor in front of SOEs because politicians and civil servant as agents have a habit of not to do their work in accordance with the benefits of

the actual owner as well as for society. The board members runs the organization not for the benefits of common shareholders but take decision for their own personal interests. Lack of information and transparency is the biggest issue of these SOEs for the reason that general public and shareholders are not much aware about the issues of SOEs. Both factors affecting the SOEs adversely.

In addition, the effect of presidency intervention has no significant relationship as moderating variable in producing connection between IOC and firm performance. Normally it is observed political intervention does not effect on producing any connection between committee independence and firm performance.it is only possible board of commissioners form committees under the Pakistan corporate law and CG guidelines. Due to political intervention and knowledge of researcher no studies have been undertaken. Therefore there is no literature which support GI in appointing any senior members and ACM to check firm performance.

Contrary to this, Beasley et al. (2000) additionally, it is stated and empirically studies shown also increase number of meeting to overcome risk management and improve inner control to improve ultimately performance of the corporate.

5.3 Theoretical and practical implications of the Study

This study has conducted an empirical analysis to examine the relationship between INC constructs, CG constructs, and SOEFP & SOENFP, while also exploring the moderating role of GI. The results of this study carry significant significance for both

practical applications and theoretical research in the social science. The subsequent section will elaborate on these contributions in detail.

5.3.1 Theoretical Implications

The present study makes a valuable contribution to the literature on the Resource-Based View (RBV) of the firm, which posits that a firm's performance is dependent on its unique resources. According to this view, a firm's resources can provide it with distinctive capabilities and have competitive advantage (Bakker et al., 2009; Lee & Chen, 2009; Lockett et al., 2009). This study has found that intangible resources, such as human capital (HC), customer capital (CC), structural capital (SC), and innovation capability (IC), have no influence SOEFP & SOENFP. Additionally, this study also contributes to agency theory by testing the effect of CG, such as ID, GD, IOC, ACM, MBS, and MBM, on the performance of SOEs..

This research revolve around the intellectual capital (INC) in the performance of state-owned enterprises in the context of Pakistan. Effective management and utilization of INC can significantly impact the efficiency and effectiveness of SOEs, contributing to their competitiveness and ability to generate sustainable value over time.

INC comprises intangible assets such as human capital, structural capital, customer capital, and innovation capability, which are critical to the success of organizations, including SOEs. Studies have shown that effective management and utilization of these intangible assets can have a positive impact on the financial performance of SOEs. These resources are critical to the success of organizations, including SOEs, as they contribute to their competitiveness and ability to generate sustainable value over time. Studies indicate that the effective management and utilization of intellectual

capital, which comprises intangible assets such as HC, SC, CC, and IC, can lead to a positive impact on the financial performance of SOEs (Ali et al., 2021; Cabrilo et al., 2018; Chen et al., 2015; Jordão & Almeida, 2017; Subramaniam & Youndt, 2005).

In this research, interaction of innovation capability with government intervention has significant influence with SOEs non- financial performance. In conclusion, the importance of INC in SOEs cannot be overstated, as it can significantly impact the efficiency and effectiveness of these organizations. Effective management and utilization of INC can enable SOEs to achieve their strategic goals and objectives, leading to sustainable economic growth. Moreover, Resource-based theory suggests that firms can gain a competitive advantage by possessing and effectively utilizing strategic resources that are valuable, rare, inimitable, and non-substitutable (Barney, 1991). Similarly, Rachmawati, (2022) supports the idea that SOEs can benefit from effectively managing and utilizing their intellectual capital to drive innovation and meet the changing demands of the market. By doing so, SOEs can stay competitive, sustain their growth trajectory, and achieve long-term profitability. This highlights the importance of recognizing the value of intangible assets and the need for strong management practices to leverage them effectively.

Corporate governance plays a critical role in SOEs, particularly in ensuring that these organizations operate in a transparent and accountable manner. Since SOEs are owned by the government, they are typically subject to greater scrutiny from the public and other stakeholders. Therefore, good corporate governance practices can help mitigate

potential risks of corruption, mismanagement, and inefficiencies, which can affect the overall performance and reputation of SOEs.

Some key elements of good corporate governance for SOEs include having an independent board of directors, setting clear objectives and performance targets, establishing effective risk management and internal control systems, ensuring transparency and disclosure of financial and non-financial information, and having a clear separation of ownership and management roles. These practices can help to promote accountability, enhance stakeholder trust and confidence, and support the long-term sustainability and success of SOEs.

According to agency theory, the relationship between shareholders (in this case, the government) and management is characterized by a principal-agent problem. The agents may have different goals and incentives than the principal, resulting in a risk of agency costs arising from conflicts of interest and information asymmetries (Jensen & Meckling, 1976). The results of this study incorporates that gender diversity has significant influence with SOE financial performance. Gender diversity on boards can also bring diverse perspectives and experiences that can contribute to better decision-making and overall organizational performance. While independence of committee has influence with non-financial performance of SOEs. Independent board committees, such as audit, nomination, and remuneration committees, can provide oversight and reduce the risk of conflicts of interest. Therefore, implementing effective corporate governance mechanisms can help address the principal-agent

problem and promote better alignment of interests between the government as the owner and SOE management.

In summary, corporate governance plays a crucial role in state-owned enterprises (SOEs) by addressing the principal-agent problem and reducing agency costs, which can ultimately lead to improved performance, accountability, and transparency.

Additionally, Resource dependency theory argues that organizations are dependent on external resources to function efficiently, and these resources can be obtained from the environment or other organizations. Therefore, effective government intervention and support can help to mitigate the resource dependence of SOEs, allowing them to operate efficiently and effectively. However, it is important to ensure that this support does not lead to excessive government influence and control, which can negatively impact SOE performance and undermine their independence. This highlights the importance of striking a balance between government intervention and SOE autonomy, which can be achieved through effective corporate governance practices.

Additionally, prior research displayed that there were variation in the results regarding the relationships of intellectual constructs, governance constructs and SOEFP & SOENFP but present research indicates that some of CG constructs have significant influence on SOENFP.

Concerning contribution to knowledge, GD has significant influence with SOEFP while IOC has association with SOENFP. On the base of resource dependency theory, this research has reviewed the model by incorporating the moderation of GI between the relationships. The researcher found that the new variable, GI shows no moderating role between the relationship of INC, CG and SOEFP & SOENFP constructs but IC is the only construct that has moderating effect between SOENFP.

This research has explained a novel conceptual framework that enrich the body of knowledge belongs to INC, CG, GI and SOEFP and SOENFP as well as filled the literature on resource dependency theory, agency theory and RBV.

5.3.2 Practical Implications

This study gives impotence to cogitative and intellectual. There innovations and capability assist politician and corporate owners in building strategies to improve performance. It also provide the data to improve the governance structure specially stated owed enterprises in Pakistan by adopting such culture and dimension of CG helps Pakistan and other Asian countries can improve performance of their SOEs for their future development and enhancement.

Corporate governance mechanisms are designed to ensure that the actions of agents (such as executives and managers) align with the interests of the principal (such as shareholders or the government in the case of SOEs), thereby reducing agency costs.

Board structures, for example, can play a critical role in corporate governance by providing oversight and strategic direction to the company. Effective board structures

can help ensure that decisions are made in the best interests of the company and its stakeholders.

Executive compensation is another important governance mechanism, as it can be used to incentivize executives to act in ways that are aligned with the company's goals. By linking executive compensation to performance metrics, companies can encourage executives to focus on achieving long-term, sustainable growth.

Finally, performance evaluation is also a key governance mechanism that can help ensure that executives and managers are held accountable for their actions. By setting clear performance targets and regularly evaluating progress, companies can identify areas for improvement and ensure that executives are working to achieve the company's goals.

In the case of SOEs, good corporate governance practices are particularly important, as these companies are often owned by the government and operate in sectors that are critical to the economy. Weak governance structures in SOEs can lead to corruption, mismanagement, and other forms of misconduct, which can have serious consequences for the economy and society as a whole. By implementing good governance practices, SOEs can improve transparency, accountability, and performance, while reducing the risk of misconduct.

Intellectual capital refers to the intangible assets of a company, including human capital (HC), structural capital (SC), customer capital (CC), and innovation capability (IC). Effective management and utilization of these assets can have a positive impact on the financial performance of SOEs.

Several studies have found that the efficient utilization of intellectual capital can lead to improved innovation capabilities, enhanced brand reputation, increased customer loyalty, and other benefits, which can in turn contribute to higher SOEFP and SOENFP (Ali et al., 2021; Cabrilo et al., 2018; Chen et al., 2015; Jordão & Almeida, 2017; Subramaniam & Youndt, 2005). For example, SOEs that effectively manage their human capital can benefit from a highly skilled and motivated workforce, which can result in increased productivity and better performance. Similarly, SOEs that have strong customer capital can benefit from a loyal customer base that is willing to pay a premium for their products or services.

Efficient utilization of intellectual capital can also contribute to better decision-making and strategic planning, as companies that are able to effectively leverage their intellectual capital are better equipped to identify and respond to changing market conditions and emerging opportunities.

In conclusion, effective management and utilization of intellectual capital can provide SOEs with a range of benefits that can positively impact their financial and non-performance. By recognizing the value of these intangible assets and implementing

strategies to leverage them, SOEs can enhance their competitiveness and create long-term value for their stakeholders.

Resource dependency theory suggests that organizations, including SOEs, can become overly dependent on external resources, including government intervention. While government support can provide critical resources such as funding, infrastructure, and regulatory support, over-reliance on such support can create inefficiencies and hinder innovation.

When SOEs become too dependent on government support, they may become complacent and less motivated to operate efficiently or innovate. This can ultimately lead to reduced competitiveness and lower financial performance. Furthermore, excessive government intervention can also lead to political interference and corruption, as government officials may use their power to influence SOEs for their own benefit or political gain. This can undermine the legitimacy and performance of SOEs, creating further inefficiencies and eroding trust among stakeholders.

To avoid the negative consequences of excessive dependence on government support, SOEs should strive to maintain a balance between the benefits of government support and the need for independence and innovation. This can be achieved by establishing clear governance mechanisms, building strong internal capabilities, and maintaining an open and transparent relationship with government stakeholders. By doing so, SOEs can ensure that they remain competitive and efficient while also fulfilling their public mandate.

5.4 Limitations and future research recommendations

The current study has several limitations. One limitation is related to the methodology used in the study. The data was collected using a survey questionnaire, which may have limitations in terms of response bias and accuracy. Future studies can consider using multiple methods to collect data, such as interviews or observation. Additionally, the sample size was limited to a specific population of top management in state-owned enterprises in Pakistan, which may limit the generalizability of the findings to other industries or countries. Time and budget constraints are often major limitations for research studies, which can restrict the sample size, scope of data collection, and complexity of analysis. However, future researchers can consider addressing these limitations by expanding the sample size, using different data collection methods, and employing advanced statistical techniques to improve the analysis.

Firstly, present research helps to put impact on INC and governance constructs on financial & SOENFP by keeping political intervention as moderating variable. Outcomes are only explain its aspects. Future research must be to explore other influential factors with these already existed constructs. Secondly, this research model based on INC and CG on SOEFP & SOENFP and used GI as moderating variables. It is recommended by adding more variables like firm size, tax and incentive system. Thirdly, as research model came with cross-sectional design of study, respondent study in a selected time frame work. It can be done on longitude study to predict the firm financial & SOENFP.

Fourthly. This study was taken data from top management of stated owned enterprises who have identical environment of Pakistan and normally one in developing countries. It can

be generalized by taking data from stakeholders of these state owned. Fifthly, the finding are support only quantitate methodology.in future research is suggested on using mix method methodologies for exact and accurate understanding. In the end, GI will test as independent variable.

5.5 Conclusion

This study aimed to examine the relationship between certain factors (INC and CG) and their impact on the performance of state-owned enterprises (SOEFP and SOENFP), while also exploring the moderating role of a third factor, GI. The study established a framework and developed 20 hypotheses to guide the analysis of the relationships between these factors. The main objective of the study was to identify the factors that can influence the performance of state-owned enterprises and examine how government intervention (represented by GI) can moderate the relationships between these factors. The study found that INC dimensions such as HC, SC, CC did not have any significant association with SOEFP and SOENFP, while GD had a significant relationship with SOEFP and IOC had a significant impact on SOENFP. However, GI has moderating effect between IC and SOENFP.

The study's results are consistent with some previous research, but also differ from others, which may be due to variations in government structures, policies, culture, or board systems. Overall, the study provides valuable insights into of constructs that can influence the performance of SOEs and highlights the importance of considering GI as a potential moderator of these relationships.

REFERENCES

- Aanu, O., & Odianonsen, I. (2014). Effectiveness of Audit Committee and Firm Financial Performance in Nigeria: An Empirical Analysis. *Journal of Accounting and Auditing: Research & Practice*, 2014.
- Abang'a, A. O. g., Taurigana, V., Wang'ombe, D., & Achiro, L. O. (2021). Corporate governance and financial performance of state-owned enterprises in Kenya. *Corporate Governance: The International Journal of Business in Society*.
- Abbott, L. J., Park, Y., & Parker, S. (2000). The effects of audit committee activity and independence on corporate fraud. *Managerial finance*.
- Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing: A Journal of Practice & Theory*, 23(1), 69-87.
- Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K. (2003). The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory*, 22(2), 17-32.
- Abbott, L. J., Parker, S., Peters, G. F., & Rama, D. V. (2007). Corporate governance, audit quality, and the Sarbanes-Oxley Act: Evidence from internal audit outsourcing. *The Accounting Review*, 82(4), 803-835.
- Abdullah, S., Ku Ismail, K. N. I., & Nachum, L. (2012). Women on boards of Malaysian firms: Impact on market and accounting performance. *Lilac, Women on Boards of Malaysian Firms: Impact on Market and Accounting Performance (September 10, 2012)*.
- Abdullah, S. N., & Ku Ismail, K. N. I. (2017). Gender, ethnic and age diversity of the boards of large Malaysian firms and performance. *Abdullah, SN, & Ismail, KNIK (2013). Gender, Ethnic and Age Diversity of the Boards of Large Malaysian Firms and Performance. Jurnal Pengurusan*, 38, 27-40.
- Abubakar. (2016). Corporate Governance , Government Intervention and Performance of State Owned Enterprises , Indonesia Doctor of Busine.
- Abubakar, E. (2016). *Corporate governance, government intervention and performance of state owned enterprises, Indonesia* Universiti Utara Malaysia].
- Acharya, A. S., Prakash, A., Saxena, P., & Nigam, A. (2013). Sampling: Why and how of it. *Indian Journal of Medical Specialties*, 4(2), 330-333.
- Adams, R. B., & Ferreira, D. (2009). Women in the boardroom and their impact on governance and performance. *Journal of financial economics*, 94(2), 291-309.
- Adonu, G. (2016). Corporate governance in small and medium scale enterprises: any relevance? *Available at SSRN 2839684*.
- Afram, J., Manresa, A., & Mas Machuca, M. (2022). The impact of employee empowerment on organisational performance: The mediating role of employee engagement and organisational citizenship behaviour. *Intangible Capital*, 18(1), 96-119.
- Aguilera, R., Duran, P., Heugens, P., Sauerwald, S., Turturea, R., & VanEssen, M. (2021). State ownership, political ideology, and firm performance around the world. *Journal of World Business*, 56(1), 101113.
- Ahire, S. L., Golhar, D. Y., & Waller, M. A. (1996). Development and validation of TQM implementation constructs. *Decision sciences*, 27(1), 23-56.

- Ahmed, I., & Manab, N. A. (2016). Influence of enterprise risk management success factors on firm financial and non-financial performance: a proposed model. *International Journal of Economics and Financial Issues*, 6(3), 830-836.
- Aivazian, V. A., Ge, Y., & Qiu, J. (2005). Can corporatization improve the performance of state-owned enterprises even without privatization? *Journal of Corporate Finance*, 11(5), 791-808.
- Al-Mamun, A., Yasser, Q. R., Entebang, H., Nathan, T. M., & Rahman, M. A. (2013). Gender diversity and economic performance of firms: Evidences from emerging market. *Journal of Economic Development, Management, IT, Finance, and Marketing*, 5(2), 100.
- Al-Tally, H. A. (2014). *An investigation of the effect of financial leverage on firm financial performance in Saudi Arabia's public listed companies* Victoria University].
- Al-kalouti, J., Kumar, V., Kumar, N., Garza-Reyes, J. A., Upadhyay, A., & Zwiendelaar, J. B. (2020). Investigating innovation capability and organizational performance in service firms. *Strategic Change*, 29(1), 103-113.
- Al Matari, E. M., Al Swidi, A. K., & Fadzil, F. H. B. (2014). The moderating effect of board diversity on the relationship between executive committee characteristics and firm performance in Oman: Empirical Study. *Asian Social Science*, 10(12), 6-20.
- Aldamen, H., Duncan, K., Kelly, S., McNamara, R., & Nagel, S. (2012). Audit committee characteristics and firm performance during the global financial crisis. *Accounting & Finance*, 52(4), 971-1000.
- Alexius, S., Giuseppe Grossi, D. U. P. a. D., & Cisneros Örnberg, J. (2015). Mission(s) impossible? Configuring values in the governance of state-owned enterprises. *International Journal of Public Sector Management*, 28(4/5), 286-306. <https://doi.org/10.1108/ijpsm-08-2015-0151>
- Alhnaity, H., Almualala, A., & Elmasri, A. K. (2018). The role of government intervention as a moderating variable in the relationship between entrepreneurial networks and business owners' performance in Jordan. *Asian Journal of Economics and Empirical Research*, 5(1), 93-98.
- Ali, M. A., Hussin, N., Haddad, H., Al-Araj, R., & Abed, I. A. (2021). Intellectual capital and innovation performance: Systematic literature review. *Risks*, 9(9), 170.
- Ali Shah, S. Z., Butt, S. A., & Hassan, A. (2009). Corporate governance and earnings management an empirical evidence form Pakistani listed companies. *European Journal of Scientific Research*, 26(4), 624-638.
- Alipour, M. (2012). The effect of intellectual capital on firm performance: an investigation of Iran insurance companies. *Measuring Business Excellence*.
- Aljuboori, Z. M., Singh, H., Haddad, H., Al-Ramahi, N. M., & Ali, M. A. (2022). Intellectual Capital and Firm Performance Correlation: The Mediation Role of Innovation Capability in Malaysian Manufacturing SMEs Perspective. *Sustainability*, 14(1), 154.
- Alotaibi, A., Edum-Fotwe, F. T., & Price, A. D. (2019). Identification of social responsibility factors within mega construction projects.
- Alpar, P., & Kim, M. (1990). A microeconomic approach to the measurement of information technology value. *Journal of management information systems*, 7(2), 55-69.

- Amhalhal, A., Anchor, J., Papalexi, M., & Dastgir, S. (2021). Organisational performance and the use of multiple performance measures in an emerging market. *International Journal of Quality & Reliability Management*.
- Amin, S., Usman, M., Sohail, N., & Aslam, S. (2018). Relationship between intellectual capital and financial performance: The moderating role of knowledge assets. *Pakistan Journal of Commerce and Social Sciences (PJCSS)*, 12(2), 521-547.
- Amorelli, M. F., & García-Sánchez, I. M. (2021). Trends in the dynamic evolution of board gender diversity and corporate social responsibility. *Corporate Social Responsibility and Environmental Management*, 28(2), 537-554.
- Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.
- Anderson, R. C., Mansi, S. A., & Reeb, D. M. (2004). Board characteristics, accounting report integrity, and the cost of debt. *Journal of Accounting and Economics*, 37(3), 315-342.
- Ang, J. S., Ding, D. K., & Thong, T. Y. (2013). Political Connection and Firm Value. *Asian Development Review*, Vol. 30 (2), pp. 131–166.
- Appleton, J., Caan, W., Cowley, S., & Kendall, S. (2007). Busting the bureaucracy: lessons from research governance in primary care. *Community Pract*, 80(2), 29-32. <https://www.ncbi.nlm.nih.gov/pubmed/17330671>
- Apriliyanti, I. D., & Kristiansen, S. O. (2019). The logics of political business in state-owned enterprises: the case of Indonesia. *International Journal of Emerging Markets*, 14(5), 709-730. <https://doi.org/10.1108/ijoem-08-2018-0433>
- Apriliyanti, I. D., & Randøy, T. (2019). Between politics and business: Boardroom decision making in state-owned Indonesian enterprises. *Corporate Governance: An International Review*, 27(3), 166-185. <https://doi.org/10.1111/corg.12270>
- Aramburu, N., & Sáenz, J. (2011). Structural capital, innovation capability, and size effect: An empirical study. *Journal of Management & Organization*, 17(3), 307-325.
- Aras, G., & Crowther, D. (2009). Corporate sustainability reporting: a study in disingenuity? *Journal of business ethics*, 87(1), 279-288.
- Archambeault, D., & DeZoort, F. T. (2001). Auditor opinion shopping and the audit committee: An analysis of suspicious auditor switches. *International Journal of Auditing*, 5(1), 33-52.
- Arora, A., & Sharma, C. (2016). Corporate governance and firm performance in developing countries: evidence from India. *Corporate Governance: The international journal of business in society*, 16(2), 420-436. <https://doi.org/10.1108/cg-01-2016-0018>
- Aslam, E., & Haron, R. (2020). The influence of corporate governance on intellectual capital efficiency: evidence from Islamic banks of OIC countries. *Asian Journal of Accounting Research*, 5(2), 195-208. <https://doi.org/10.1108/ajar-05-2020-0030>
- Atmaja, L. S. (2009). Dividend policy in Australia. *Jurnal Keuangan dan Perbankan*, 13(2), 260-270.
- Azam, M. N., Hoque, M. Z., & Yeasmin, M. (2010). Audit committee and equity return: the case of Australian firms. *International review of business research papers*, 6(4), 202-208.

- Babic, M. (2021). State capital in a geoeconomic world: mapping state-led foreign investment in the global political economy. *Review of International Political Economy*, 1-28.
- Bacon, D. R., Sauer, P. L., & Young, M. (1995). Composite reliability in structural equations modeling. *Educational and psychological measurement*, 55(3), 394-406.
- Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74-94.
- Baker, W. E., & Sinkula, J. M. (2005). Environmental marketing strategy and firm performance: Effects on new product performance and market share. *Journal of the Academy of Marketing Science*, 33(4), 461-475.
- Bala, M. (2006). Economic policy and state owned enterprises: evolution towards privatisation in India.
- Ball, A., & Bebbington, J. (2008). Accounting and reporting for sustainable development in public service organizations. *Public Money and Management*, 28(6), 323-326.
- Banker, R., Potter, G., & Srinivasan, D. (1998). *An Empirical Investigation of an Incentive Plan Based on Nonfinancial Measures*.
- Barclay, D., Higgins, C., & Thompson, R. (1995). *The partial least squares (PLS) approach to casual modeling: personal computer adoption ans use as an Illustration*.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120.
- Barney, J. B. (2002). Strategic management: From informed conversation to academic discipline. *Academy of Management Perspectives*, 16(2), 53-57.
- Barsoum, M. (2022). The Importance of Qualitative and Phenomenological Research Methods in Business Studies. *Monarch Business School Research Paper Series*, 1(1).
- Baruch, Y., & Holtom, B. C. (2008). Survey response rate levels and trends in organizational research. *Human Relations*, 61(8), 1139-1160.
<https://doi.org/10.1177/0018726708094863>
- Battor, M., & Battor, M. (2010). The impact of customer relationship management capability on innovation and performance advantages: testing a mediated model. *Journal of Marketing Management*, 26(9-10), 842-857.
- Bauer, R., Guenster, N., & Otten, R. (2004). Empirical evidence on corporate governance in Europe: The effect on stock returns, firm value and performance. *Journal of Asset management*, 5(2), 91-104.
- Bauwhede, H. V. (2009). On the relation between corporate governance compliance and operating performance. *Accounting and Business Research*, 39(5), 497-513.
- Baysinger, B. D., & Butler, H. N. (1985). Corporate governance and the board of directors: Performance effects of changes in board composition. *Journal of law, economics, & organization*, 1(1), 101-124.
- Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Lapides, P. D. (2000). Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. *Accounting Horizons*, 14(4), 441-454.
- Beaton, E., MacIndoe, H., & Wang, T. (2021). Combining nonprofit service and advocacy: Organizational structures and hybridity. *Nonprofit and Voluntary Sector Quarterly*, 50(2), 372-396.

- Beatty, R. P., & Zajac, E. J. (1994). Managerial incentives, monitoring, and risk bearing: A study of executive compensation, ownership, and board structure in initial public offerings. *Administrative Science Quarterly*, 313-335.
- Bedard, J. C., & Johnstone, K. M. (2004). Earnings manipulation risk, corporate governance risk, and auditors' planning and pricing decisions. *The Accounting Review*, 79(2), 277-304.
- Behn, B. K., & Riley Jr, R. A. (1999). Using nonfinancial information to predict financial performance: The case of the US airline industry. *Journal of Accounting, Auditing & Finance*, 14(1), 29-56.
- Belkhir, M. (2009). Board of directors' size and performance in the banking industry. *International Journal of Managerial Finance*.
- Bell, B., Harley. (2018). Business research methods. In: Oxford University Press.
- Bentler, P. M., & Chou, C.-P. (1987). Practical issues in structural modeling. *Sociological Methods & Research*, 16(1), 78-117.
- Berle, A. A., & Means, G. C. (1932). The modern corporation and private property. New Brunswick. NJ: Transaction.
- Bertrand, O., & Betschinger, M.-A. (2012). Performance of domestic and cross-border acquisitions: Empirical evidence from Russian acquirers. *Journal of Comparative Economics*, 40(3), 413-437.
- Bhagat, S., & Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, 14(3), 257-273.
- Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance: an empirical investigation. *MIS quarterly*, 169-196.
- Bhaumik, S. K., & Selarka, E. (2012). Does ownership concentration improve M&A outcomes in emerging markets?: Evidence from India. *Journal of Corporate Finance*, 18(4), 717-726.
- Bijttebier, P., Delva, D., Vanoost, S., Bobbaers, H., Lauwers, P., & Vertommen, H. (2000). Reliability and validity of the Critical Care Family Needs Inventory in a Dutch-speaking Belgian sample. *Heart & Lung*, 29(4), 278-286.
- Black, S. A., & Porter, L. J. (1996). Identification of the critical factors of TQM. *Decision sciences*, 27(1), 1-21.
- Bland, J. M., & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *BMJ*, 314(7080), 572.
- Boardman, A. E., & Vining, A. R. (1989). Ownership and performance in competitive environments: A comparison of the performance of private, mixed, and state-owned enterprises. *The journal of law and Economics*, 32(1), 1-33.
- Bogdan, R. C., & Biklen, S. K. (1998). Foundations of qualitative research in education. *Qualitative research in education: An introduction to theory and methods*, 1-48.
- Bokhari, S. (1998). History and Evolution of Privatisation in Pakistan. National Seminar on Privatization held on Sep,
- Bollen, K. A. (1989). *Structural equations with latent variables* (Vol. 210). John Wiley & Sons.
- Bontis, N. (1998). Intellectual capital: an exploratory study that develops measures and models. *Management Decision*, 36(2), 63-76.
<https://doi.org/10.1108/00251749810204142>
- Bontis, N. (1999). Managing organisational knowledge by diagnosing intellectual capital: framing and advancing the state of the field. *International Journal of*

- Technology Management*, 18(5/6/7/8), 433.
<https://doi.org/10.1504/ijtm.1999.002780>
- Bontis, N. (2001a). Assessing knowledge assets: a review of the models used to measure intellectual capital. *International journal of management reviews*, 3(1), 41-60.
- Bontis, N. (2001b). Managing organizational knowledge by diagnosing intellectual capital: framing and advancing the state of the field. In *Knowledge management and business model innovation* (pp. 267-297). IGI Global.
- Bontis, N., Ciambotti, M., Palazzi, F., & Sgro, F. (2018). Intellectual capital and financial performance in social cooperative enterprises. *Journal of Intellectual Capital*, 19(4), 712-731. <https://doi.org/10.1108/jic-03-2017-0049>
- Bontis, N., Crossan, M. M., & Hulland, J. (2002). Managing an organizational learning system by aligning stocks and flows. *Journal of Management Studies*, 39(4), 437-469.
- Boubakri, N., Cosset, J.-C., & Saffar, W. (2008). Political connections of newly privatized firms. *Journal of Corporate Finance*, 14(5), 654-673.
- Bougie, R., & Sekaran, U. (2016). *Research Methods For Business: A Skill Building 7 ed.* Wily.
- Braga, A. C., Barros, C., Delgado, P., Martins, C., Sousa, S., Velosa, J., Delgado, I., & Sampaio, P. (2018). Multivariate Statistical Process Control Based on Principal Component Analysis: Implementation of Framework in R. International Conference on Computational Science and Its Applications, Brezeanu, P., & Stănculescu, A. (2008). Corporate governance models. VOL. VIII PART I, 8(1), 15-18.
- Brink, H., Van der Walt, C., & Van Rensburg, G. (2006). *Fundamentals of research methodology for health care professionals*. Juta and Company Ltd.
- Brown, R. M., Gatian, A. W., & Hicks Jr, J. O. (1995). Strategic information systems and financial performance. *Journal of management information systems*, 11(4), 215-248.
- Bruno, V., & Claessens, S. (2010). Corporate governance and regulation: can there be too much of a good thing? *Journal of Financial Intermediation*, 19(4), 461-482.
- Bryman, A. (2016). *Social research methods*. Oxford university press.
- Budding, T., Faber, B., & Schoute, M. (2021). Integrating non-financial performance indicators in budget documents: the continuing search of Dutch municipalities. *Journal of Public Budgeting, Accounting & Financial Management*.
- Budiarso, N. S. (2019). Intellectual capital in public sector. *Accountability*, 8(1), 42-50.
- Burrell, G., & Morgan, G. (2017). *Sociological paradigms and organisational analysis: Elements of the sociology of corporate life*. Routledge.
- Busch, T., & Friede, G. (2018). The robustness of the corporate social and financial performance relation: A second-order meta-analysis. *Corporate Social Responsibility and Environmental Management*, 25(4), 583-608.
- Bushman, R. M., Indjejikian, R. J., & Smith, A. (1996). CEO compensation: The role of individual performance evaluation. *Journal of Accounting and Economics*, 21(2), 161-193.
- Byrne, B. M. (2013). *Structural equation modeling with Mplus: Basic concepts, applications, and programming*. routledge.

- Byron, K., & Post, C. (2016). Women on boards of directors and corporate social performance: A meta-analysis. *Corporate Governance: An International Review*, 24(4), 428-442.
- Cabello-Medina, C., López-Cabral, Á., & Valle-Cabrera, R. (2011). Leveraging the innovative performance of human capital through HRM and social capital in Spanish firms. *The International Journal of Human Resource Management*, 22(04), 807-828.
- Cabrilo, S., Kianto, A., & Milic, B. (2018). The effect of IC components on innovation performance in Serbian companies. *VINE Journal of Information and Knowledge Management Systems*.
- Campbell, B. A., Coff, R., & Kryscynski, D. (2012). Rethinking sustained competitive advantage from human capital. *Academy of Management Review*, 37(3), 376-395.
- Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: complex or simple? Research case examples. *Journal of research in Nursing*, 25(8), 652-661.
- Canavire-Bacarreza, G., Castro Peñarrieta, L., & Ugarte Ontiveros, D. (2021). Outliers in Semi-Parametric Estimation of Treatment Effects. *Econometrics*, 9(2), 19.
- Carnes, C. M., Xu, K., Sirmon, D. G., & Karadag, R. (2018). How Competitive Action Mediates the Resource Slack–Performance Relationship: A Meta-Analytic Approach. *Journal of Management Studies*, 56(1), 57-90.
<https://doi.org/10.1111/joms.12391>
- Carney, M., Estrin, S., Liang, Z., & Shapiro, D. (2019). National institutional systems, foreign ownership and firm performance: The case of understudied countries. *Journal of World Business*, 54(4), 244-257.
<https://doi.org/10.1016/j.jwb.2018.03.003>
- Carter, D. A., D'Souza, F., Simkins, B. J., & Simpson, W. G. (2010). The gender and ethnic diversity of US boards and board committees and firm financial performance. *Corporate Governance: An International Review*, 18(5), 396-414.
- Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial review*, 38(1), 33-53.
- Casonato, F., Farneti, F., & Dumay, J. (2019). Social capital and integrated reporting. *Journal of Intellectual Capital*, 20(1), 144-164.
<https://doi.org/10.1108/jic-08-2018-0132>
- Cateni, S., Colla, V., Vannucci, M., Aramburo, J., & Trevino, A. R. (2008). Outlier detection methods for industrial applications. *Advances in Robotics, Automation and Control*, 265-282.
- Čater, T., & Čater, B. (2009). (In) tangible resources as antecedents of a company's competitive advantage and performance. *Journal for East European Management Studies*, 186-209.
- Cavana, R., Delahaye, B., & Sekeran, U. (2001). *Applied business research: Qualitative and quantitative methods*. John Wiley & Sons.
- Cecchetti, I., Allegrini, V., & Monteduro, F. (2018). The Role of Boards of Directors in Transparency and Integrity in State-Owned Enterprises. In *Hybridity in the Governance and Delivery of Public Services* (pp. 53-87). Emerald Publishing Limited.

- Cegarra-Navarro, J.-G., & Sánchez-Polo, M. T. (2008a). Linking the individual forgetting context with customer capital from a seller's perspective. *Journal of the Operational Research Society*, 59(12), 1614-1623.
- Cegarra-Navarro, J. G., & Sánchez-Polo, M. T. (2008b). Defining the knowledge that an organisation requires to create customer capital from a customer perspective. *The Service Industries Journal*, 28(8), 1125-1140.
- Chatterjee, S., & Yilmaz, M. (1992a). A review of regression diagnostics for behavioral research. *Applied Psychological Measurement*, 16(3), 209-227.
- Chatterjee, S., & Yilmaz, M. R. (1992b). Chaos, fractals and statistics. *Statistical Science*, 7(1), 49-68.
- Chaveerug, A., & Ussahawanitchakit, P. (2008). Learning orientation, innovation capability, and organizational performance in Thai audit firms: Moderating effects of organization climate and uncertainty environment. *Review of Business Research*, 8(2), 92-102.
- Chen, C. R., Li, Y., Luo, D., & Zhang, T. (2017). Helping hands or grabbing hands? An analysis of political connections and firm value. *Journal of Banking & Finance*, 80, 71-89.
- Chen, J., Zhao, X., & Wang, Y. (2015). A new measurement of intellectual capital and its impact on innovation performance in an open innovation paradigm. *International Journal of Technology Management*, 67(1), 1-25.
- Chen, K. Y., & Zhou, J. (2007). Audit committee, board characteristics, and auditor switch decisions by Andersen's clients. *Contemporary Accounting Research*, 24(4), 1085-1117.
- Chen, M. C., Bontis, N., Cheng, S. J., & Hwang, Y. (2005). An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance. *Journal of Intellectual Capital*, 6(2), 159-176. <https://doi.org/10.1108/14691930510592771>
- Chen, S., Sun, Z., Tang, S., & Wu, D. (2011). Government intervention and investment efficiency: Evidence from China. *Journal of Corporate Finance*, 17(2), 259-271.
- Chen, Y.-S. (2008). The positive effect of green intellectual capital on competitive advantages of firms. *Journal of business ethics*, 77(3), 271-286.
- Cheng, M. Y., Lin, J. Y., Hsiao, T. Y., & Lin, T. W. (2010). Invested resource, competitive intellectual capital, and corporate performance. *Journal of Intellectual Capital*, 11(4), 433-450. <https://doi.org/10.1108/14691931011085623>
- Cheng, S. (2008). Board size and the variability of corporate performance. *Journal of financial economics*, 87(1), 157-176.
- Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern methods for business research*, 295(2), 295-336.
- Chiucchi, M. S., & Giuliani, M. (2022). Theoretical Aspects of Intangibles and Intellectual Capital Disclosure Through the Main Frameworks of Integrated Reporting and Non-Financial Information. In *Non-financial Disclosure and Integrated Reporting* (pp. 155-165). Springer.
- Chou, C.-C., Lin, W. T., Lee, C., Tao, X., & Qian, Z. (2021). The impacts of information technology and E-commerce on operational performances: A two-stage dynamic partial adjustment approach. *Journal of Industrial and Production Engineering*, 38(4), 291-322.

- Chow, C. W., & Van Der Stede, W. A. (2006). The use and usefulness of nonfinancial performance measures. *Management accounting quarterly*, 7(3), 1.
- Christiansen, L. E., Lin, H., Pereira, M. J., Topalova, P., & Turk, R. (2016). *Gender diversity in senior positions and firm performance: Evidence from Europe*. International Monetary Fund.
- Chua, D. B. H. (2006). *Statistical analysis for whole networks*. Boston University.
- Chung, H. F., Ding, Z., & Ma, X. (2019). Organisational learning and export performance of emerging market entrepreneurial firms: The roles of RBV mechanism and decision-making approach. *European Journal of Marketing*.
- Churchill Jr, G. A. (1979). A paradigm for developing better measures of marketing constructs. *Journal of marketing research*, 16(1), 64-73.
- Claessens, S., & Fan, J. P. (2002). Corporate governance in Asia: A survey. *International Review of finance*, 3(2), 71-103.
- Clarke, M., Seng, D., & Whiting, R. H. (2011). Intellectual capital and firm performance in Australia. *Journal of Intellectual Capital*.
- Coakes, S. J., & Steed, L. G. (2001). SPSS: Analysis without anguish: Version 10.0 for windows.
- Coase, R. H. (1937). The nature of the firm. *economica*, 4(16), 386-405.
- Cohen, J. (2013). *Statistical power analysis for the behavioral sciences*. Academic press.
- Cohen, L., Manion, L., & Morrison, K. (2002). *Research methods in education*. routledge.
- Conger, J. A., Finegold, D., & Lawler, E. E. (1998). Appraising boardroom performance. *Harvard business review*, 76, 136-164.
- Cordeiro, J. J., Profumo, G., & Tutore, I. (2020). Board gender diversity and corporate environmental performance: The moderating role of family and dual-class majority ownership structures. *Business Strategy and the Environment*, 29(3), 1127-1144.
- Cornett, M. M., Guo, L., Khaksari, S., & Tehranian, H. (2010). The impact of state ownership on performance differences in privately-owned versus state-owned banks: An international comparison. *Journal of financial intermediation*, 19(1), 74-94.
- Cousins, P. D., Handfield, R. B., Lawson, B., & Petersen, K. J. (2006). Creating supply chain relational capital: The impact of formal and informal socialization processes. *Journal of operations management*, 24(6), 851-863.
- Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.
- Crotty, M. (2020). *The foundations of social research: Meaning and perspective in the research process*. Routledge.
- Crowther, D., & Seifi, S. (2016). The governance of sustainable development. In *Accountability and Social Responsibility: International Perspectives* (pp. 23-47). Emerald Group Publishing Limited.
- Dah, A., Beyrouti, N., & Showeiry, M. (2012). The effect of independent directors on firm value.
- Daiser, P., Ysa, T., & Schmitt, D. (2017). Corporate governance of state-owned enterprises: a systematic analysis of empirical literature. *International Journal of Public Sector Management*, 30(5), 447-466.
<https://doi.org/10.1108/ijpsm-10-2016-0163>

- Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management journal*, 42(6), 674-686.
- Dalwai, T., & Salehi, M. (2021). Business strategy, intellectual capital, firm performance, and bankruptcy risk: evidence from Oman's non-financial sector companies. *Asian Review of Accounting*.
- Darmadi, S. (2011). Board diversity and firm performance: The Indonesian evidence. *Corporate ownership and control Journal*, 8.
- de las Heras-Rosas, C., & Herrera, J. (2021). Innovation and competitive intelligence in business. A bibliometric analysis. *International Journal of Financial Studies*, 9(2), 31.
- De Maesschalck, R., Jouan-Rimbaud, D., & Massart, D. L. (2000). The mahalanobis distance. *Chemometrics and intelligent laboratory systems*, 50(1), 1-18.
- Delgado-Verde, M., Martín-de Castro, G., & Emilio Navas-López, J. (2011). Organizational knowledge assets and innovation capability: evidence from Spanish manufacturing firms. *Journal of intellectual capital*, 12(1), 5-19.
- Demsetz, H., & Lehn, K. (1985). The structure of corporate ownership: Causes and consequences. *Journal of political economy*, 93(6), 1155-1177.
- Denicolai, S., Ramirez, M., & Tidd, J. (2014). Creating and capturing value from external knowledge: the moderating role of knowledge intensity. *R&D Management*, 44(3), 248-264.
- Dercon, B. (2007). Corporate governance after the Asian crisis: Querying the Indonesian environment. *Managerial Law*, 49(4), 129-140.
- Devaraj, S., & Kohli, R. (2000). Information technology payoff in the health-care industry: a longitudinal study. *Journal of management information systems*, 16(4), 41-67.
- Dewhurst, F. W., & Navarro, J. G. C. (2004). External communities of practice and relational capital. *The learning organization*.
- Dey, A. (2008). Corporate governance and agency conflicts. *Journal of Accounting Research*, 46(5), 1143-1181.
- Dicko, S., & El Ibrami, H. (2013). Directors' Connections, Financial Resources and Performance: An In-Depth Analysis of Canadian Companies. *International Journal of Business and Management*, 8(10), 1.
- Dijkstra, D. (2020). *Uniqueness: How it affects firm performance and market share, and implications for platform firms*
- Dijkstra, T. (1983). Some comments on maximum likelihood and partial least squares methods. *Journal of econometrics*, 22(1-2), 67-90.
- Dillman, D. A. (2011). *Mail and Internet surveys: The tailored design method--2007 Update with new Internet, visual, and mixed-mode guide*. John Wiley & Sons.
- Ding, L., Velicer, W. F., & Harlow, L. L. (1995). Effects of estimation methods, number of indicators per factor, and improper solutions on structural equation modeling fit indices. *Structural equation modeling: a multidisciplinary journal*, 2(2), 119-143.
- do Rosário Cabrita, M., & Vaz, J. L. (2005). Intellectual capital and value creation: Evidence from the por-tuguese banking industry. *Electronic Journal of Knowledge Management*, 4(1), 11-20.
- Dobrovic, J., Lambovska, M., Gallo, P., & Timkova, V. (2018). Non-financial indicators and their importance in small and medium-sized enterprises. *Journal of Competitiveness*, 10(2), 41.

- Downe-Wamboldt, B. (1992). Content analysis: method, applications, and issues. *Health care for women international*, 13(3), 313-321.
- Duarte, P. A. O., & Raposo, M. L. B. (2010). A PLS model to study brand preference: An application to the mobile phone market. In *Handbook of partial least squares* (pp. 449-485). Springer.
- Dubey, R., Gunasekaran, A., Childe, S. J., Blome, C., & Papadopoulos, T. (2019). Big data and predictive analytics and manufacturing performance: integrating institutional theory, resource-based view and big data culture. *British Journal of Management*, 30(2), 341-361.
- Dühnfort, A. M., Klein, C., & Lampenius, N. (2008). Theoretical foundations of corporate governance revisited: A critical review. *Corporate Ownership & Control*, 6(2), 424-433.
- Dutta, P., & Bose, S. (2006). Gender diversity in the boardroom and financial performance of commercial banks: Evidence from Bangladesh. *The Cost & Management*, 34(6), 70-74.
- Dyer, J. H., & Singh, H. (1998). The relational view: Cooperative strategy and sources of interorganizational competitive advantage. *Academy of management review*, 23(4), 660-679.
- Edvinsson, L., & Malone, M. S. (1997). *Intellectual capital*. HarperBusiness.
- Ehikioya, B. I. (2009). Corporate governance structure and firm performance in developing economies: evidence from Nigeria. *Corporate Governance: The international journal of business in society*, 9(3), 231-243.
- Eisenhardt, K. M. (1989). Agency theory: An assessment and review. *Academy of management review*, 14(1), 57-74.
- Eklof, J., Podkorytova, O., & Malova, A. (2020). Linking customer satisfaction with financial performance: an empirical study of Scandinavian banks. *Total Quality Management & Business Excellence*, 31(15-16), 1684-1702.
- Elfgrén, O., & Persson, M. (2019). Institutional or not?: Municipally-Owned Enterprises' Quest for Legitimacy among Stakeholders and Conflicting Goals. In.
- Eniola, A. A., & Entebang, H. (2015). Government policy and performance of small and medium business management. *International Journal of Academic Research in Business and Social Sciences*, 5(2), 237-248.
- Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance: An International Review*, 11(2), 102-111.
- Ermaya, H. N. L., & Mashuri, A. A. S. (2021). Corporate Governance and Intellectual Capital: Impact on the Financial Performance of State-Owned Enterprises in Indonesia. *Journal of Sosial Science*, 2(5), 627-636.
- Ersoy, A., & Ehtiyar, R. (2017). Happiness at work. *Developments in Social Sciences*, 32, 375-386.
- Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, 5(1), 1-4.
- Faccio, M., Masulis, R. W., & McConnell, J. J. (2006). Political connections and corporate bailouts. *the Journal of Finance*, 61(6), 2597-2635.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *The journal of law and Economics*, 26(2), 301-325.

- Fan, I. Y. H., & Lee, R. W. B. (2016). Intellectual capital-based innovation planning: empirical studies using wiNK model. *Journal of Intellectual Capital*, 17(3), 553-569. <https://doi.org/10.1108/jic-12-2015-0116>
- Fan, J. P., Rui, O. M., & Zhao, M. (2008). Public governance and corporate finance: Evidence from corruption cases. *Journal of Comparative Economics*, 36(3), 343-364.
- Fan, J. P., Wong, T. J., & Zhang, T. (2014). Politically connected CEOs, corporate governance, and the post-IPO performance of China's partially privatized firms. *Journal of Applied Corporate Finance*, 26(3), 85-95.
- Fan, M., Qalati, S. A., Khan, M. A. S., Shah, S. M. M., Ramzan, M., & Khan, R. S. (2021). Effects of entrepreneurial orientation on social media adoption and SME performance: The moderating role of innovation capabilities. *PLoS One*, 16(4), e0247320.
- Fatima, S., Mortimer, T., & Bilal, M. (2018). Corporate governance failures and the role of institutional investors in Pakistan: Lessons to be learnt from UK. *International Journal of Law and Management*, 60(2), 571-585.
- Fauzi, F., & Locke, S. (2012). Board structure, ownership structure and firm performance: A study of New Zealand listed-firms.
- Field, A. (2009). Logistic regression. *Discovering statistics using SPSS*, 264, 315.
- Finkelstein, S., & Hambrick, D. C. (1989). Chief executive compensation: A study of the intersection of markets and political processes. *Strategic management journal*, 10(2), 121-134.
- Fire, S., & Williams, S. M. (2003). Intellectual capital and traditional measures of corporate performance. *Journal of intellectual capital*.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, 18(1), 39-50.
- Fornell, C., Mithas, S., Morgeson III, F. V., & Krishnan, M. S. (2006). Customer satisfaction and stock prices: High returns, low risk. *Journal of marketing*, 70(1), 3-14.
- Fornell, C., Morgeson III, F. V., & Hult, G. T. M. (2016). Stock returns on customer satisfaction do beat the market: Gauging the effect of a marketing intangible. *Journal of marketing*, 80(5), 92-107.
- Francoeur, C., Labelle, R., & Sinclair-Desgagné, B. (2008). Gender diversity in corporate governance and top management. *Journal of business ethics*, 81(1), 83-95.
- Frey, B. S. (2020). What are the opportunities for future happiness research? *International Review of Economics*, 67(1), 5-12.
- Fruhling, A. L., & Siau, K. (2007). Assessing organizational innovation capability and its effect on e-commerce initiatives. *Journal of Computer Information Systems*, 47(4), 91-103.
- Galabova, L., & Ahonen, G. (2011a). Is intellectual capital-based strategy market-based or resource-based? On sustainable strategy in a knowledge-based economy. *Journal of Human Resource Costing & Accounting*, 15(4), 313-327.
- Galabova, L., & Ahonen, G. (2011b). Is intellectual capital-based strategy market-based or resource-based? On sustainable strategy in a knowledge-based economy. *Journal of Human Resource Costing & Accounting*.

- Gallardo-Vázquez, D., Barroso-Méndez, M. J., Pajuelo-Moreno, M. L., & Sánchez-Meca, J. (2019). Corporate Social Responsibility Disclosure and Performance: A Meta-Analytic Approach. *Sustainability*, 11(4), 1115.
- Gan, H., Park, M. S., & Suh, S. (2020). Non-financial performance measures, CEO compensation, and firms' future value. *Journal of Business Research*, 110, 213-227.
- Gao, Y. (2011). Government Intervention, Perceived Benefit, and Bribery of Firms in Transitional China. *Journal of Business Ethics*, 104(2), 175-184.
<https://doi.org/10.1007/s10551-011-0896-8>
- Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information systems*, 16(1), 5.
- Geisser, S. (1974). A predictive approach to the random effect model. *Biometrika*, 61(1), 101-107.
- Gellweiler, C. (2018). Cohesion of RBV and industry view for competitive positioning. *Strategic Management*, 23(2), 3-12.
- George, A. L., & Bennett, A. (2005). *Case studies and theory development in the social sciences*. mit Press.
- Gërguri-Rashiti, S., Ramadani, V., Abazi-Alili, H., Dana, L.-P., & Ratten, V. (2017). ICT, Innovation and Firm Performance: The Transition Economies Context. *Thunderbird International Business Review*, 59(1), 93-102.
<https://doi.org/10.1002/tie.21772>
- Ghuri, P., Grønhaug, K., & Strange, R. (2020). *Research methods in business studies*. Cambridge University Press.
- Globerman, S., & Shapiro, D. (2008). The international mobility of highly educated workers among OECD countries. *Transnational Corporations*, 17(1), 1-36.
- Gloet, M., & Samson, D. (2016). Knowledge management and systematic innovation capability. *International Journal of Knowledge Management (IJKM)*, 12(2), 54-72.
- Gold, A. H., Malhotra, A., & Segars, A. H. (2001). Knowledge management: An organizational capabilities perspective. *Journal of management information systems*, 18(1), 185-214.
- Goldman, E., Rocholl, J., & So, J. (2009). Do politically connected boards affect firm value? *The review of financial studies*, 22(6), 2331-2360.
- Gomez, A. M. D., & Crowther, D. (2022). Enforcing the Social Pillar of Sustainability: How Management Education Could Address Human Concerns? In *The Equal Pillars of Sustainability*. Emerald Publishing Limited.
- Götz, O., Liehr-Gobbers, K., & Krafft, M. (2010). Evaluation of structural equation models using the partial least squares (PLS) approach. In *Handbook of partial least squares* (pp. 691-711). Springer.
- Grossi, G., Giuseppe Grossi, D. U. P. a. D., Papenfuß, U., & Tremblay, M.-S. (2015). Corporate governance and accountability of state-owned enterprises. *International Journal of Public Sector Management*, 28(4/5), 274-285.
<https://doi.org/10.1108/ijpsm-09-2015-0166>
- Grover, V., & Niederman, F. (2021). Research Perspectives: The Quest for Innovation in Information Systems Research: Recognizing, Stimulating, and Promoting Novel and Useful Knowledge. *Journal of the Association for Information Systems*, 22(6), 1753-1782.

- Grover, V., Teng, J., Segars, A. H., & Fiedler, K. (1998). The influence of information technology diffusion and business process change on perceived productivity: The IS executive's perspective. *Information & Management*, 34(3), 141-159.
- Groysberg, B., & Bell, D. (2013). Dysfunction in the boardroom. *Harvard business review*, 91(6), 89-97.
- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, 2(163-194), 105.
- Guest, P. M. (2009). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance*, 15(4), 385-404.
- Guthrie, J., Ricceri, F., & Dumay, J. (2012). Reflections and projections: a decade of intellectual capital accounting research. *The british accounting review*, 44(2), 68-82.
- Hafsi, T. (1985). The dynamics of government in business. *Interfaces*, 15(4), 62-69.
- Haggarty, L., & Mary, S. (1997). A new data base on state-owned enterprises. *The World Bank Economic Review*, 11(3), 491-513.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). Overview of multivariate methods. *Multivariate data analysis*.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (1998). *Multivariate data analysis*. New Jersey.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* 6th Edition. In: New Jersey: Prentice Hall.
- Hair, J. F., Ringle, C. M., & Sarstedt, M. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19(2), 139-152.
- Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*.
- Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40(3), 414-433.
- Hair, J. J. F., Sarstedt, M., Matthews, L. M., & Ringle, C. M. (2016). Identifying and treating unobserved heterogeneity with FIMIX-PLS: part I – method. *European business review*, 28(1), 63-76. <https://doi.org/10.1108/eb-09-2015-0094>
- Hair Jr, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). SEM: An introduction. *Multivariate data analysis: A global perspective*, 5(6), 629-686.
- Hair Jr, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. *Journal of Business Research*, 109, 101-110.
- Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, 1(2), 107-123.
- Hamidah, H., Wicaksono, A., & Ahmad, G. N. (2017). THE EFFECT OF FIRM PERFORMANCE, LEVERAGE, FIRM SIZE, AND FIRM GROWTH ON AGENCY COST OF TRADING COMPANY IN INDONESIA, MALAYSIA, AND THAILAND: RESEARCH PERIOD OF 2009 –2013. *JRMSI-Jurnal Riset Manajemen Sains Indonesia*, 8(1), 120-138.
- Hapsoro, D. (2018). Relationship Analysis of Corporate Governance Mechanisms, Audit Fees, and Financial Report Quality in Indonesia. *International Journal of Engineering & Technology*, 7(3.21), 73-81.

- Hariyati, H., Tjahjadi, B., & Soewarno, N. (2019). The mediating effect of intellectual capital, management accounting information systems, internal process performance, and customer performance. *International journal of productivity and performance management*.
- Hart, O. (1995). *Firms, contracts, and financial structure*. Clarendon press.
- Hart, O., Shleifer, A., & Vishny, R. W. (1997). The proper scope of government: theory and an application to prisons. *The Quarterly Journal of Economics*, 112(4), 1127-1161.
- Hartline, M. D., & Ferrell, O. C. (1996). The management of customer-contact service employees: An empirical investigation. *Journal of marketing*, 60(4), 52-70.
- Hawkins, S. A., & Hastie, R. (1990). Hindsight: Biased judgments of past events after the outcomes are known. *Psychological Bulletin*, 107(3), 311.
- Hawley, J., & Williams, A. (1997). The emergence of fiduciary capitalism. *Corporate Governance: An International Review*, 5(4), 206-213.
- Hayes, R., Mehran, H., & Schaefer, S. (2004). Board committee structures, ownership, and firm performance. Federal Reserve Bank of New York Finance Seminar Series, New York University, New York.
- Hejazi, R., Ghanbari, M., & Alipour, M. (2016). Intellectual, human and structural capital effects on firm performance as measured by Tobin's Q. *Knowledge and Process Management*, 23(4), 259-273.
- Heneghan, J., & O'Donnell, D. (2007). Governance, compliance and legal enforcement: evaluating a recent Irish initiative. *Corporate Governance: The international journal of business in society*, 7(1), 54-65.
- Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine*, 292, 114523.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2012). Using partial least squares path modeling in advertising research: basic concepts and recent issues. In *Handbook of research on international advertising*. Edward Elgar Publishing.
- Heo, K. (2018). Effects of corporate governance on the performance of state-owned enterprises. *World Bank Policy Research Working Paper*(8555).
- Hermanto, Y. B., Lusy, L., & Widyastuti, M. (2021). How financial performance and state-owned enterprise (SOE) values are affected by good corporate governance and intellectual capital perspectives. *Economies*, 9(4), 134.
- Herremans, I. M., Isaac, R. G., Kline, T. J., & Nazari, J. A. (2011). Intellectual capital and uncertainty of knowledge: control by design of the management system. *Journal of business ethics*, 98(4), 627-640.
- Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of Management*, 35(6), 1404-1427.
- Hitt, L. M., & Brynjolfsson, E. (1996). Productivity, business profitability, and consumer surplus: Three different measures of information technology value. *MIS quarterly*, 121-142.
- Hitt, M. A., Bierman, L., Shimizu, K., & Kochhar, R. (2001). Direct and moderating effects of human capital on strategy and performance in professional service firms: A resource-based perspective. *Academy of Management journal*, 44(1), 13-28.
- Holland, K. (2019). Government investment in publicly traded firms. *Journal of Corporate Finance*.

- Honghui, L. (2017). *The effect of corporate governance on performance of firms listed on the Nairobi securities exchange* University of Nairobi].
- Hoque, M. Z., Islam, M. R., & Azam, M. N. (2013). Board Committee Meetings and Firm Financial Performance: An Investigation of Australian Companies. *International Review of Finance*, 13(4), 503-528.
- Hormiga, E., Batista-Canino, R. M., & Sánchez-Medina, A. (2011). The role of intellectual capital in the success of new ventures. *International Entrepreneurship and Management Journal*, 7(1), 71-92.
- Hryckiewicz, A. (2014). What do we know about the impact of government interventions in the banking sector? An assessment of various bailout programs on bank behavior. *Journal of Banking & Finance*, 46, 246-265.
- Hsu, H. (2006). Knowledge management and intellectual capital (PhD thesis). Department of Management, Southern Illinois University Carbondale, USA.
- Hsu, L. C., & Wang, C. H. (2012). Clarifying the effect of intellectual capital on performance: the mediating role of dynamic capability. *British Journal of Management*, 23(2), 179-205.
- Hsu, W.-Y., & Petchsakulwong, P. (2010). The impact of corporate governance on the efficiency performance of the Thai non-life insurance industry. *The Geneva Papers on Risk and Insurance-Issues and Practice*, 35(1), S28-S49.
- Hu, F., & Leung, S. C. (2012). Top management turnover, firm performance and government control: Evidence from China's listed state-owned enterprises. *The International Journal of Accounting*, 47(2), 235-262.
- Hu, L. t., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, 6(1), 1-55.
- Hu, Y., & Liu, D. (2022). Government as a non-financial participant in innovation: How standardization led by government promotes regional innovation performance in China. *Technovation*, 102524.
- Hudson, W. J. (1993). *Intellectual capital: How to build it, enhance it, use it*. Wiley.
- Hudspeth, N., Cameron, J., Baloch, S., Tarzia, L., & Hegarty, K. (2022). Health practitioners' perceptions of structural barriers to the identification of intimate partner abuse: a qualitative meta-synthesis. *BMC health services research*, 22(1), 1-20.
- Ibrahim, A. R., Zolait, A. H. S., Subramanian, S., & Ashtiani, A. V. (2009). Organizational innovative capabilities: An empirical study of Malaysian firms. *Journal of Innovation and business best Practices*, 1(2), 9-18.
- Iftikhar, M. (2015). State-owned enterprises in Pakistan: The need for corporate governance and private investment. *Prime Institute, Islamabad*.
- Iqbal, A., Latif, F., Marimon, F., Sahibzada, U. F., & Hussain, S. (2018). From knowledge management to organizational performance. *Journal of Enterprise Information Management*. <https://doi.org/10.1108/jeim-04-2018-0083>
- Iqbal, Q., Ahmad, N. H., Nasim, A., & Khan, S. A. R. (2020). A moderated-mediation analysis of psychological empowerment: Sustainable leadership and sustainable performance. *Journal of Cleaner Production*, 262, 121429.
- Jackling, B., & Johl, S. (2009). Board structure and firm performance: Evidence from India's top companies. *Corporate Governance: An International Review*, 17(4), 492-509.
- Jahan, M. A., Lubberink, M., & Van Peursem, K. (2021). Does prestigious board membership matter? Evidence from New Zealand. *Accounting & Finance*, 61(1), 977-1015.

- Jain, T., & Jamali, D. (2016). Looking inside the black box: The effect of corporate governance on corporate social responsibility. *Corporate Governance: An International Review*, 24(3), 253-273.
- Jaksic, V., Silic, D., & Silic, I. (2021). Critical realism and pragmatism in transport demand research. *Global Journal of Business and Integral Security*, 1(1), 1-15.
- Jameaba, M. S. (2018). Deposit insurance and financial intermediation: The case of Indonesia Deposit Insurance Corporation. *Cogent Economics & Finance*, 6(1), 1-32.
- Jaruzelski, B., & Dehoff, K. (2009). The Global Innovation 1000: Profit Down, Spending Steady. *Sydney, Australia: Booz & Company Inc.*
- Jaruzelski, B., Dehoff, K., & Bordia, R. (2005). The Booz Allen Hamilton global innovation 1000: Money isn't everything. *Strategy and Business*, 41(Winter).
- Jarvis, C. B., MacKenzie, S. B., & Podsakoff, P. M. (2003). A critical review of construct indicators and measurement model misspecification in marketing and consumer research. *Journal of consumer research*, 30(2), 199-218.
- Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *the Journal of Finance*, 48(3), 831-880.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure. *Journal of Financial Economics*, 3(4), 305-360.
- Ji, J., Talavera, O., & Yin, S. (2019). Frequencies of board meetings on various topics and corporate governance: evidence from China. *Review of Quantitative Finance and Accounting*, 1-42.
- Jia, N., Huang, K. G., & Man Zhang, C. (2019). Public governance, corporate governance, and firm innovation: An examination of state-owned enterprises. *Academy of Management journal*, 62(1), 220-247.
- Johnson, R. A., & Wichern, D. W. (2014). *Applied multivariate statistical analysis* (Vol. 6). Pearson London, UK:.
- Joo, H.-Y., Seo, Y.-W., & Min, H. (2018). Examining the effects of government intervention on the firm's environmental and technological innovation capabilities and export performance. *International Journal of Production Research*, 56(18), 6090-6111.
<https://doi.org/10.1080/00207543.2018.1430902>
- Jordão, R. V. D., & Almeida, V. R. d. (2017). Performance measurement, intellectual capital and financial sustainability. *Journal of Intellectual Capital*, 18(3), 643-666.
- Jöreskog, K. G., & Sörbom, D. (1996). *PRELIS 2 user's reference guide: A program for multivariate data screening and data summarization: A preprocessor for LISREL*. Scientific Software International.
- Joshi, A., Benitez, J., Huygh, T., Ruiz, L., & De Haes, S. (2022). Impact of IT governance process capability on business performance: Theory and empirical evidence. *Decision Support Systems*, 153, 113668.
- Joshi, M., Cahill, D., & Sidhu, J. (2010). Intellectual capital performance in the banking sector: An assessment of Australian owned banks. *Journal of Human Resource Costing & Accounting*, 14(2), 151-170.
- Julizaerma, M. K., & Sori, Z. M. (2012). Gender diversity in the boardroom and firm performance of Malaysian public listed companies. *Procedia-Social and Behavioral Sciences*, 65, 1077-1085.

- Kabir, R., & Thai, H. M. (2017). Does corporate governance shape the relationship between corporate social responsibility and financial performance? *Pacific Accounting Review*, 29(2), 227-258.
- Kalasin, K., Cuervo-Cazurra, A., & Ramamurti, R. (2019). State ownership and international expansion: The S-Curve relationship. *Global Strategy Journal*.
- Kale, P., Singh, H., & Perlmutter, H. (2000). Learning and protection of proprietary assets in strategic alliances: Building relational capital. *Strategic management journal*, 21(3), 217-237.
- Kaloti, R., & Fouad, F. M. (2022). The politics of COVID-19 vaccine equity among refugee populations in Lebanon. *Journal of Global Health Economics and Policy*, 2, e2022003.
- Kamal, M. (2010). Corporate governance and state-owned enterprises: a study of Indonesia's code of corporate governance. *J. Int'l Com. L. & Tech.*, 5, 206.
- Kamath, B. (2019). Impact of corporate governance characteristics on intellectual capital performance of firms in India. *International Journal of Disclosure and Governance*, 1-17.
- Kanchana, N., & Mohan, P. R. R. R. (2017). A Review of Empirical Studies in Intellectual Capital and Firm Performance. *Indian Journal of Commerce & Management Studies*, VIII(1), 52-58. <https://doi.org/10.18843/ijcms/v8i1/08>
- Kaplan, R. S., & Norton, D. P. (2005). The balanced scorecard: measures that drive performance. *Harvard business review*, 83(7), 172.
- Karagiannis, D., Waldner, F., Stoeger, A., & Nemetz, M. (2008). A knowledge management approach for structural capital. International conference on practical aspects of knowledge management,
- Kariuki, A., & Kiambati, K. (2017). Intellectual capital, corporate culture and performance of firms listed on Nairobi Securities Exchange.
- Kashif, M., Zarkada, A., & Ramayah, T. (2018). The impact of attitude, subjective norms, and perceived behavioural control on managers' intentions to behave ethically. *Total Quality Management & Business Excellence*, 29(5-6), 481-501.
- Kengatharan, N. (2019). A knowledge-based theory of the firm: Nexus of intellectual capital, productivity and firms' performance. *International Journal of Manpower*.
- Khalid, R., Ali, T., & Javed, M. U. (2019). Corporate Governance: Theory and Practice Impact of Corporate Governance on Firm Performance. *Jinnah Business Review*, 7(1), 66-75.
- Khalique, M., Shaari, J. A. N. b., & Isa, A. H. b. M. (2013). The road to the development of intellectual capital theory. *International Journal of Learning and Intellectual Capital*, 10(2), 122-136.
- Khan, A. M., Arafat, M. Y., Raushan, M. A., Khan, M. S., Dwivedi, A. K., Khan, M. M., & Saleem, I. (2019). Role of intellectual capital in augmenting the start-up intentions of Indians—an analysis using GEM data. *Journal of Global Entrepreneurship Research*, 9(1), 25.
- Khan, M. (2008). Reinventing Public Enterprises. *United Nations (Ed). Public Enterprises: Unresolved Challenges and New Opportunities. United Nations publication. New York.*
- Khan, S. N., & Ali, E. I. E. (2018). THE MODERATING EFFECT OF INTELLECTUAL CAPITAL ON THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND COMPANIES PERFORMANCE IN PAKISTAN. 2, 1.

- Khan, S. Z., Yang, Q., & Waheed, A. (2019). Investment in intangible resources and capabilities spurs sustainable competitive advantage and firm performance. *Corporate Social Responsibility and Environmental Management*, 26(2), 285-295.
- Khanchel, I. (2007). Corporate governance: measurement and determinant analysis. *Managerial Auditing Journal*, 22(8), 740-760.
<https://doi.org/10.1108/02686900710819625>
- Kharal, M., Zia ur Rehman, D., Abrar, M., Khan, M. S., & Kharal, M. (2014). Intellectual capital & firm performance: An empirical study on the oil & gas sector of Pakistan. Kharal, M., Abrar, M., Zia-ur-Rehman, M., Khan, MS, & Kharal, M.(2014). *Intellectual Capital & Firm Performance: An Empirical Study on the Oil & Gas Sector of Pakistan. International Journal of Accounting and Financial Reporting*, 4(1), 238.
- Kim, K. (2021). Locating new 'state capitalism' in advanced economies: an international comparison of government ownership in economic entities. *Contemporary Politics*, 1-21.
- Klein, A. (1998). Firm performance and board committee structure. *The journal of law and Economics*, 41(1), 275-304.
- Klein, A. (2002). Economic determinants of audit committee independence. *The Accounting Review*, 77(2), 435-452.
- Kline, R. B. (2015). *Principles and practice of structural equation modeling*. Guilford publications.
- Kotabe, M., Jiang, C. X., & Murray, J. Y. (2016). Examining the Complementary Effect of Political Networking Capability With Absorptive Capacity on the Innovative Performance of Emerging-Market Firms. *Journal of Management*, 43(4), 1131-1156. <https://doi.org/10.1177/0149206314548226>
- Kowalski, P., Büge, M., Sztajerowska, M., & Egeland, M. (2013). State-owned enterprises.
- Krishnan, J., & Ye, Z. (2005). Why some companies seek shareholder ratification on auditor selection. *Accounting Horizons*, 19(4), 237-254.
- Kristoffersen, E., Mikalef, P., Blomsma, F., & Li, J. (2021). The effects of business analytics capability on circular economy implementation, resource orchestration capability, and firm performance. *International Journal of Production Economics*, 239, 108205.
- Kumar, N., & Singh, J. (2012). Outside directors, corporate governance and firm performance: Empirical evidence from India. *Asian Journal of Finance & Accounting*, 4(2), 39.
- Kumar, N., & Singh, J. (2013). Effect of board size and promoter ownership on firm value: some empirical findings from India. *Corporate Governance: The international journal of business in society*.
- Kusumawardhani, D., Rahayu, A. Y., & Maksum, I. R. (2015). The role of government in MSMEs: The empowerment of MSMEs during the free trade era in Indonesia. *Australasian Accounting, Business and Finance Journal*, 9(2), 23-42.
- Kuzman, T., Talavera, O., & Bellos, S. K. (2018). Politically induced board turnover, ownership arrangements, and performance of SOEs. *Corporate Governance: An International Review*, 26(3), 160-179.
- Kweh, Q. L., Ting, I. W. K., Hanh, L. T. M., & Zhang, C. (2019). Intellectual capital, governmental presence, and firm performance of publicly listed

- companies in Malaysia. *International Journal of Learning and Intellectual Capital*, 16(2), 193-211.
- Kyal, H., Mandal, A., Kujur, F., & Guha, S. (2021). Individual entrepreneurial orientation on MSME's performance: the mediating effect of employee motivation and the moderating effect of government intervention. *IIM Ranchi journal of management studies*, 1(1), 21-37. <https://doi.org/10.1108/irjms-07-2021-0041>
- Kyal, H., Mandal, A., Kujur, F., & Guha, S. (2022). Individual entrepreneurial orientation on MSME's performance: the mediating effect of employee motivation and the moderating effect of government intervention. *IIM Ranchi journal of management studies*, 1(1), 21-37.
- Kyereboah-Coleman, A. (2007). The impact of capital structure on the performance of microfinance institutions. *The Journal of Risk Finance*.
- Kyriakopoulos, K., Meulenbergh, M., & Nilsson, J. (2004). The impact of cooperative structure and firm culture on market orientation and performance. *Agribusiness: An International Journal*, 20(4), 379-396.
- Larasati, I. T., & Prasetyob, K. (2019). The effect of good corporate governance on a firm's value with financial performance as the intervening variable (empirical study on state-owned enterprises listed on IDX 2012-2016). *International Journal of Innovation, Creativity and Change*, 9(8), 49-63.
- Larcker, D. F., Richardson, S. A., & Tuna, I. r. (2007). Corporate governance, accounting outcomes, and organizational performance. *The Accounting Review*, 82(4), 963-1008.
- Lazzarini, S. G., & Musacchio, A. (2018). State ownership reinvented? Explaining performance differences between state-owned and private firms. *Corporate Governance: An International Review*, 26(4), 255-272. <https://doi.org/10.1111/corg.12239>
- Lee, H. Y., Mande, V., & Ortman, R. (2004). The effect of audit committee and board of director independence on auditor resignation. *Auditing: A Journal of Practice & Theory*, 23(2), 131-146.
- Leedy, P. D., & Ormrod, J. E. (2005). *Practical research* (Vol. 108). Pearson Custom Saddle River, NJ, USA.
- Lefort, F., & Urzúa, F. (2008). Board independence, firm performance and ownership concentration: Evidence from Chile. *Journal of Business Research*, 61(6), 615-622. <https://doi.org/10.1016/j.jbusres.2007.06.036>
- Lei, Q., Lu, R., & Ren, L. (2019). Non-CEO top managers' monitoring power and CEO pay-performance sensitivity in state-owned enterprises: Evidence from Chinese state-owned listed firms. *China Journal of Accounting Research*, 12(4), 411-430.
- Leung, T., Chan, C., Hu, C., Yu, J., & Wong, P. (2008). Photocatalytic disinfection of marine bacteria using fluorescent light. *Water research*, 42(19), 4827-4837.
- Levi, M., Li, K., & Zhang, F. (2015). Are women more likely to seek advice than men? Evidence from the boardroom. *Journal of Risk and Financial Management*, 8(1), 127-149.
- Li, M., Liu, H., & Chiang, Y.-M. (2022). Government intervention, leverage adjustment, and firm performance: Evidence from defaulting firms. *Pacific-Basin Finance Journal*, 76, 101885.

- Li, M. H., Cui, L., & Lu, J. (2014). Varieties in state capitalism: Outward FDI strategies of central and local state-owned enterprises from emerging economy countries. In *State-Owned Multinationals* (pp. 175-210). Springer.
- Liang, T. P., You, J. J., & Liu, C. C. (2010). A resource-based perspective on information technology and firm performance: a meta analysis. *Industrial Management & Data Systems*.
- Lim, S., Matolcsy, Z., & Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, 16(3), 555-583.
- Limijaya, A., Hutagaol-Martowidjojo, Y., & Hartanto, E. (2021). Intellectual capital and firm performance in Indonesia: The moderating role of corporate governance. *International Journal of Managerial and Financial Accounting*, 13(2), 159-182.
- Lin, J. W., Li, J. F., & Yang, J. S. (2006). The effect of audit committee performance on earnings quality. *Managerial Auditing Journal*.
- Lin, X., & Zhang, Y. (2009). Bank ownership reform and bank performance in China. *Journal of Banking & Finance*, 33(1), 20-29.
- Lindermüller, D., Sohn, M., & Hirsch, B. (2020). Trading off financial and non-financial performance information to evaluate state-owned enterprise performance—a process tracing-experiment. *International Public Management Journal*, 1-21.
- Lindermüller, D., Sohn, M., & Hirsch, B. (2022). Trading off financial and non-financial performance information to evaluate state-owned enterprise performance—a process tracing-experiment. *International Public Management Journal*, 25(5), 639-659.
- Ling, Y.-H. (2012). A study on the influence of intellectual capital and intellectual capital complementarity on global initiatives. *Electronic Journal of Knowledge Management*, 10(2), pp154-163-pp154-163.
- Locke, S., & Duppatti, G. (2014). Financial performance in Indian state-owned enterprises following corporate governance reforms. In *Mechanisms, Roles and Consequences of Governance: Emerging Issues*. Emerald Group Publishing Limited.
- López-Arceiz, F. J., Bellostas-Pérezgrueso, A. J., Moneva-Abadía, J. M., & Rivera-Torres, M. P. (2018). The role of corporate governance and transparency in the generation of financial performance in socially responsible companies. *Spanish Journal of Finance and Accounting/Revista Española de Financiación y Contabilidad*, 47(1), 44-80.
- Lopez-Vega, H., & Lakemond, N. (2022). Tapping into emerging markets: EMNEs' strategies for innovation capability building. *Global Strategy Journal*, 12(2), 394-417.
- Low, D. C., Roberts, H., & Whiting, R. H. (2015). Board gender diversity and firm performance: Empirical evidence from Hong Kong, South Korea, Malaysia and Singapore. *Pacific-Basin Finance Journal*, 35, 381-401.
- Lucia-Palacios, L., Bordonaba-Juste, V., Polo-Redondo, Y., & Grünhagen, M. (2014). Technological opportunism effects on IT adoption, intra-firm diffusion and performance: Evidence from the US and Spain. *Journal of Business Research*, 67(6), 1178-1188.
- Lueckmann, J.-M., Boelts, J., Greenberg, D., Goncalves, P., & Macke, J. (2021). Benchmarking Simulation-Based Inference. International Conference on Artificial Intelligence and Statistics,

- MacCallum, R. C., & Austin, J. T. (2000). Applications of structural equation modeling in psychological research. *Annual review of psychology*, 51(1), 201-226.
- MacQueen, J. (1967). Some methods for classification and analysis of multivariate observations. Proceedings of the fifth Berkeley symposium on mathematical statistics and probability,
- Mahmood, M. A., & Mann, G. J. (1993). Measuring the organizational impact of information technology investment: an exploratory study. *Journal of management information systems*, 10(1), 97-122.
- Main, B., & Yu, H. (2012). Political Intervention, Corporate Governance and Firm Performance: An Empirical Investigation in Japan and Taiwan. *International Journal of Finance and Economics*, 1(1), 134-151.
- Malhotra, N., Hall, J., Shaw, M., & Oppenheim, P. (2006). *Marketing research: An applied orientation*. Pearson Education Australia.
- Malhotra, N. K., & Birks, D. (2007). Marketing Research, An Applied Approach, European Edition. *International Journal of Supply Chain Management*, 3(2), 60-85.
- Malone, E. L. (1997). Intellectual capital: realizing your company's true value by finding its hidden brainpower. NY: *Harper Business*.
- Mangena, M., & Pike, R. (2005). The effect of audit committee shareholding, financial expertise and size on interim financial disclosures. *Accounting and Business Research*, 35(4), 327-349.
- Manly, B. F., & Alberto, J. A. N. (2016). *Multivariate statistical methods: a primer*. Chapman and Hall/CRC.
- Manzanegue, M., Ramírez, Y., & Diéguez-Soto, J. (2017). Intellectual capital efficiency, technological innovation and family management. *Innovation*, 19(2), 167-188.
- Mardjono, A. (2005). A tale of corporate governance: lessons why firms fail. *Managerial Auditing Journal*, 20(3), 272-283.
- Marinova, J., Plantenga, J., & Remery, C. (2016). Gender diversity and firm performance: Evidence from Dutch and Danish boardrooms. *The International Journal of Human Resource Management*, 27(15), 1777-1790.
- Mariotti, S., & Marzano, R. (2021). Institutions, Corporate Governance, and Internationalization of State-owned Enterprises in a Varieties of Capitalism Framework1. In *The Multiple Dimensions of Institutional Complexity in International Business Research*. Emerald Publishing Limited.
- Maroufkhani, P., Wagner, R., Wan Ismail, W. K., Baroto, M. B., & Nourani, M. (2019). Big data analytics and firm performance: A systematic review. *Information*, 10(7), 226.
- Martens, M. P. (2005). Future directions of structural equation modeling in counseling psychology. *The Counseling Psychologist*, 33(3), 375-382.
- Martinez-Roman, J. A., Gamero, J., & Tamayo, J. A. (2011). Analysis of innovation in SMEs using an innovative capability-based non-linear model: A study in the province of Seville (Spain). *Technovation*, 31(9), 459-475.
- Matis, D., Manoiu, S. M., & Damian, M. I. (2016). Corporate Governance: Conceptual Grounding and Evolutions. *Corporate Governance in Knowledge-Based Society*.
- Maxwell, J. A. (2012). *Qualitative research design: An interactive approach*. Sage publications.

- Maylor, H., Blackmon, K., & Huemann, M. (2016). *Researching business and management*. Macmillan International Higher Education.
- McDowell, W. C., Peake, W. O., Coder, L., & Harris, M. L. (2018). Building small firm performance through intellectual capital development: Exploring innovation as the “black box”. *Journal of Business Research*, 88, 321-327. <https://doi.org/10.1016/j.jbusres.2018.01.025>
- McGee, R. W., & Bose, S. (2008). Corporate governance in transition economies: a comparative study of Armenia, Azerbaijan and Georgia.
- McMullen, D. A., & Raghunandan, K. (1996). Enhancing audit committee effectiveness. *Journal of Accountancy*, 182(2), 79.
- Meggison, W. L., & Netter, J. M. (2001). From state to market: A survey of empirical studies on privatization. *Journal of economic literature*, 39(2), 321-389.
- Menor, L. J., Kristal, M. M., & Rosenzweig, E. D. (2007). Examining the influence of operational intellectual capital on capabilities and performance. *Manufacturing & Service Operations Management*, 9(4), 559-578.
- Merendino, A., & Melville, R. (2019). The board of directors and firm performance: empirical evidence from listed companies. *Corporate Governance: The International Journal of Business in Society*.
- Mertler, C. A., & Reinhart, R. V. (2016). *Advanced and multivariate statistical methods: Practical application and interpretation*. Routledge.
- Meyers, L. S., Gamst, G., & Guarino, A. J. (2016). *Applied multivariate research: Design and interpretation*. Sage publications.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook*. sage.
- Min, B.-S., Chen, C.-N., & Tien, C. (2022). Firms' responses to corporate governance reform in an emerging economy from the perspective of institutional logics. *Journal of Business Research*, 147, 278-289.
- Mintzberg, H. (1983). The case for corporate social responsibility. *Journal of Business Strategy*.
- Mirza, H. H., Andleeb, S., & Ramzan, F. (2012). Gender diversity and firm performance: Evidence from Pakistan. *Journal of Social and development Sciences*, 3(5), 161-166.
- Mishra, R., & Kapil, S. (2017). Effect of ownership structure and board structure on firm value: evidence from India. *Corporate Governance: The International Journal of Business in Society*.
- Mitchell, R. K., Weaver, G. R., Agle, B. R., Bailey, A. D., & Carlson, J. (2016). Stakeholder agency and social welfare: Pluralism and decision making in the multi-objective corporation. *Academy of management review*, 41(2), 252-275.
- Mizruchi, M. S. (1996). What do interlocks do? An analysis, critique, and assessment of research on interlocking directorates. *Annual review of sociology*, 22(1), 271-298.
- Mohammed, A. A., & Irbo, M. M. (2018). Intellectual capital and firm performance nexus: evidence from Ethiopian private commercial banks. *International Journal of Learning and Intellectual Capital*, 15(3), 189-203.
- Molina-Azorin, J. F., & Feters, M. D. (2022). Books on mixed methods research: A window on the growth in number and diversity. In (Vol. 16, pp. 8-16): SAGE Publications Sage CA: Los Angeles, CA.

- Monteiro, A. P., Vale, J., Leite, E., Lis, M., & Kurowska-Pysz, J. (2022). The impact of information systems and non-financial information on company success. *International Journal of Accounting Information Systems*, 45, 100557.
- Montgomery, C. A., & Collis, D. (1995). Competing on resources: strategy in the 1990s. *Harvard business review*, 73(4), 118-128.
- Moon, Y. J., & Kym, H. G. (2006). A model for the value of intellectual capital. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 23(3), 253-269.
- Moore, K. (2021). Hypothesis Testing. In *Measuring Productivity in Education and Not-for-Profits* (pp. 133-143). Springer.
- Mukhopadhyay, T., Lerch, F. J., & Mangal, V. (1997). Assessing the impact of information technology on labor productivity a field study. *Decision Support Systems*, 19(2), 109-122.
- Musleh Alsartawi, A. (2019). Board independence, frequency of meetings and performance. *Journal of Islamic Marketing*, 10(1), 290-303.
- Myers, M. D. (2019). *Qualitative research in business and management*. Sage.
- Nappi, V., & Kelly, K. (2022). Review of key performance indicators for measuring innovation process performance. *International Journal of Entrepreneurship and Innovation Management*, 26(1-2), 85-109.
- Naseer, S., Khawaja, K. F., Qazi, S., Syed, F., & Shamim, F. (2021). How and when information proactiveness leads to operational firm performance in the banking sector of Pakistan? The roles of open innovation, creative cognitive style, and climate for innovation. *International Journal of Information Management*, 56, 102260.
- Nawaz Khan, S., Hussain, R. I., Ur-Rehman, S., Maqbool, M. Q., Engku Ali, E. I., Numan, M., & Ntim, C. G. (2019). The mediating role of innovation between corporate governance and organizational performance: Moderating role of innovative culture in Pakistan textile sector. *Cogent Business & Management*, 6(1). <https://doi.org/10.1080/23311975.2019.1631018>
- Nawaz, T., & Haniffa, R. (2017). Determinants of financial performance of Islamic banks: an intellectual capital perspective. *Journal of Islamic Accounting and Business Research*.
- Nekhili, M., & Gatfaoui, H. (2013). Are demographic attributes and firm characteristics drivers of gender diversity? Investigating women's positions on French boards of directors. *Journal of business ethics*, 118(2), 227-249.
- Neuman, W. R., & Guggenheim, L. (2011). The evolution of media effects theory: A six-stage model of cumulative research. *Communication theory*, 21(2), 169-196.
- Newton, A. N. (2015). Executive compensation, organizational performance, and governance quality in the absence of owners. *Journal of Corporate Finance*, 30, 195-222.
- Newton, K. M., Carpenter, J. S., Guthrie, K. A., Anderson, G. L., Caan, B., Cohen, L. S., Ensrud, K. E., Freeman, E. W., Joffe, H., Sternfeld, B., Reed, S. D., Sherman, S., Sammel, M. D., Kroenke, K., Larson, J. C., & Lacroix, A. Z. (2014). Methods for the design of vasomotor symptom trials: the menopausal strategies: finding lasting answers to symptoms and health network. *Menopause*, 21(1), 45-58. <https://doi.org/10.1097/GME.0b013e31829337a4>
- Ngah, R., & Ibrahim, A. (2009). The relationship of intellectual capital. *Innovation and*.

- Nicholson, G. J., & Kiel, G. C. (2007). Can directors impact performance? A case-based test of three theories of corporate governance. *Corporate Governance: An International Review*, 15(4), 585-608.
- Niven, P. R. (2002). *Balanced scorecard step-by-step: Maximizing performance and maintaining results*. John Wiley & Sons.
- NJUGUNA, E. W. (2014). INTELLECTUAL CAPITAL AND FINANCIAL PERFORMANCE OF KENYAN STATE CORPORATIONS.
- Njuguna, M. S. (2018). *The role of corporate governance practices on financial performance of not-for-profit faith-based Hospitals in Central Kenya* [Strathmore University].
- Noreng, Ø. (1992). Germany's role in the European energy market. In *Energy*. Scandinavian University Press Oslo.
- Norušis, M. J. (2006). *SPSS 14.0 guide to data analysis*. Prentice Hall Upper Saddle River, NJ.
- Ntim, C. G., & Osei, K. A. (2011). The impact of corporate board meetings on corporate performance in South Africa. *African Review of Economics and Finance*, 2(2), 83-103.
- NUHU, M. (2017). *The influence of board mechanisms to the perceived performance of listed firms in Nigeria*
- Nurharjanto, Haryono, T., Suhardjanto, D., Lukviarman, N., & Setiany, E. (2018). Corporate governance, privatisation, and financial performance of Indonesian state-owned enterprises. *International Journal of Revenue Management*, 10(2), 168-188.
- Ogbonnaya, C., & Valizade, D. (2018). High performance work practices, employee outcomes and organizational performance: a 2-1-2 multilevel mediation analysis. *The International Journal of Human Resource Management*, 29(2), 239-259.
- Oke, A., Burke, G., & Myers, A. (2007). Innovation types and performance in growing UK SMEs. *International Journal of Operations & Production Management*.
- Okhmatovskiy, I. (2010). Performance Implications of Ties to the Government and SOEs: A Political Embeddedness Perspective. *Journal of Management Studies*, 47(6), 1020-1047. <https://doi.org/10.1111/j.1467-6486.2009.00881.x>
- Oliver, J., Qu, W., & Wise, V. (2014). Corporate governance: a discussion on minority shareholder protection in China. *International Journal of Economics and Finance*, 6(3), 111-119.
- Omran, M., Khallaf, A., Gleason, K., & Tahat, Y. (2021). Non-financial performance measures disclosure, quality strategy, and organizational financial performance: a mediating model. *Total Quality Management & Business Excellence*, 32(5-6), 652-675.
- Opland, L. E., Pappas, I. O., Engesmo, J., & Jaccheri, L. (2022). Employee-driven digital innovation: A systematic review and a research agenda. *Journal of Business Research*, 143, 255-271.
- Pallant, J. (2020). *SPSS survival manual: A step by step guide to data analysis using IBM SPSS*. Routledge.
- Panda, B., & Leepsa, N. M. (2017). Agency theory: Review of Theory and Evidence on Problems and Perspectives. *Indian Journal of Corporate Governance*, 10(1), 74-95. <https://doi.org/10.1177/0974686217701467>
- Park, S. H., & Luo, Y. (2001). Guanxi and organizational dynamics: Organizational networking in Chinese firms. *Strategic management journal*, 22(5), 455-477.

- Pearce, J. A., & Zahra, S. A. (1992). Board composition from a strategic contingency perspective. *Journal of Management Studies*, 29(4), 411-438.
- Pedro, E., Leitão, J., & Alves, H. (2018). Back to the future of intellectual capital research: a systematic literature review. *Management Decision*, 56(11), 2502-2583. <https://doi.org/10.1108/md-08-2017-0807>
- PeiZhi, W., & Ramzan, M. (2020). Do corporate governance structure and capital structure matter for the performance of the firms? An empirical testing with the contemplation of outliers. *PLoS One*, 15(2), e0229157.
- Peng, D. X., & Lai, F. (2012). Using partial least squares in operations management research: A practical guideline and summary of past research. *Journal of operations management*, 30(6), 467-480.
- Peng, M. W. (2004). Outside directors and firm performance during institutional transitions. *Strategic management journal*, 25(5), 453-471.
- Penrose, E. (1959). The theory of the growth of the firm. *John Wiley & Sons, New York*.
- Peterson, R. A., & Kim, Y. (2013). On the relationship between coefficient alpha and composite reliability. *Journal of applied psychology*, 98(1), 194.
- Petter, S., Straub, D., & Rai, A. (2007). Specifying formative constructs in information systems research. *MIS quarterly*, 623-656.
- Pfeffer, J., & Salancik, G. (1978). . A resource dependence perspective.
- Phusavat, K., Comepa, N., Sitko-Lutek, A., & Ooi, K.-B. (2011). Interrelationships between intellectual capital and performance: Empirical examination. *Industrial Management & Data Systems*, 111(6), 810-829.
- Phusavat, K., Comepa, N., Sitko-Lutek, A., & Ooi, K. B. (2011). Interrelationships between intellectual capital and performance: Empirical examination. *Industrial Management & Data Systems*.
- Ping Jr, R. A. (1993). The effects of satisfaction and structural constraints on retailer exiting, voice, loyalty, opportunism, and neglect. *Journal of retailing*, 69(3), 320-352.
- Polit, D. F., & Beck, C. T. (2010). Generalization in quantitative and qualitative research: Myths and strategies. *International journal of nursing studies*, 47(11), 1451-1458.
- Pradhan, R. P., Arvin, M. B., & Norman, N. R. (2015). The dynamics of information and communications technologies infrastructure, economic growth, and financial development: Evidence from Asian countries. *Technology in Society*, 42, 135-149.
- Prajogo, D., Toy, J., Bhattacharya, A., Oke, A., & Cheng, T. (2018). The relationships between information management, process management and operational performance: Internal and external contexts. *International Journal of Production Economics*, 199, 95-103.
- Pratali, P. (2003). Strategic management of technological innovations in the small to medium enterprise. *European Journal of Innovation Management*.
- Priem, R. L., & Butler, J. E. (2001). Is the resource-based “view” a useful perspective for strategic management research? *Academy of management review*, 26(1), 22-40.
- Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the nutrition society*, 63(4), 655-660.
- Rachmawati, R., Deliana, D., & Lestari, R. (2022). Intellectual Capital Performance Of State-Owned Enterprises In Indonesia. *Kajian Akuntansi*, 23(1), 14-25.

- Rai, A., Patnayakuni, R., & Patnayakuni, N. (1997). Technology investment and business performance. *Communications of the ACM*, 40(7), 89-97.
- Rai, A., Patnayakuni, R., & Seth, N. (2006). Firm performance impacts of digitally enabled supply chain integration capabilities. *MIS quarterly*, 225-246.
- Rajapathirana, R. J., & Hui, Y. (2018). Relationship between innovation capability, innovation type, and firm performance. *Journal of Innovation & Knowledge*, 3(1), 44-55.
- Ramírez, Y., Manzanque, M., & Priego, A. M. (2017). Formulating and elaborating a model for the measurement of intellectual capital in Spanish public universities. *International Review of Administrative Sciences*, 83(1), 149-176.
- Rao, K., & Tilt, C. (2016). Board composition and corporate social responsibility: The role of diversity, gender, strategy and decision making. *Journal of Business Ethics*, 138(2), 327-347.
- Raudla, R. (2022). Politicians' use of performance information in the budget process. *Public Money & Management*, 42(3), 144-151.
- Raza, S. A., Shah, N., & Arif, I. (2021). Relationship between FDI and economic growth in the presence of good governance system: Evidence from OECD Countries. *Global Business Review*, 22(6), 1471-1489.
- Rebeiz, K. S., & Salameh, Z. (2006). Relationship between governance structure and financial performance in construction. *Journal of Management in Engineering*, 22(1), 20-26.
- Reddy, Y., & Padmakumar, K. (2008). SOE Governance: International Trends and Uniqueness of Kerala Experiences.
- Rehman, S.-u., Mohamed, R., & Ayoup, H. (2019). The mediating role of organizational capabilities between organizational performance and its determinants. *Journal of Global Entrepreneurship Research*, 9(1), 1-23.
- Rehman, S. U., Elrehail, H., Alsaad, A., & Bhatti, A. (2021). Intellectual capital and innovative performance: a mediation-moderation perspective. *Journal of Intellectual Capital*.
- Reinartz, W., Haenlein, M., & Henseler, J. (2009). An empirical comparison of the efficacy of covariance-based and variance-based SEM. *International Journal of research in Marketing*, 26(4), 332-344.
- Rencher, A. C. (2005). A review of "Methods of Multivariate Analysis, ". In: Taylor & Francis.
- Reynaldi, D., & Wijaya, C. (2022). The Influence of Intellectual Capital and Innovation on the Performance of SOEs in the Banking Sector in Indonesia. *Technium Soc. Sci. J.*, 36, 86.
- Ringle, C. M., Sarstedt, M., & Straub, D. W. (2012). Editor's comments: a critical look at the use of PLS-SEM in "MIS Quarterly". *MIS quarterly*, iii-xiv.
- Rodríguez-Aceves, L., Mojarro-Durán, B. I., & Rivera, A. E. (2022). Enabling Knowledge Sharing Through Relational Capital in a Family Business Context. *Journal of the Knowledge Economy*, 1-31.
- Roos, J., Edvinsson, L., & Dragonetti, N. C. (1997). *su*. Springer.
- Rosenbusch, N., Gusenbauer, M., Hatak, I., Fink, M., & Meyer, K. E. (2019). Innovation Offshoring, Institutional Context and Innovation Performance: A Meta-Analysis. *Journal of Management Studies*, 56(1), 203-233.
- Ross, S. A. (1973). The economic theory of agency: The principal's problem. *The American Economic Review*, 63(2), 134-139.

- Ryan Jr, H. E., & Wiggins III, R. A. (2001). The influence of firm-and manager-specific characteristics on the structure of executive compensation. *Journal of Corporate Finance*, 7(2), 101-123.
- Rygh, A. (2019). Bureaucrats in International Business: A Review of Five Decades of Research on State-Owned MNEs. 49-69. https://doi.org/10.1007/978-3-030-03931-8_3
- Saeidi, P., Saeidi, S. P., Gutierrez, L., Streimikiene, D., Alrasheedi, M., Saeidi, S. P., & Mardani, A. (2021). The influence of enterprise risk management on firm performance with the moderating effect of intellectual capital dimensions. *Economic Research-Ekonomska Istraživanja*, 34(1), 122-151.
- Salancik, G. R., & Pfeffer, J. (1978). Uncertainty, secrecy, and the choice of similar others. *Social Psychology*, 246-255.
- Salazar-Elena, J. C., Cancino, C. A., López, A. L., & de Ros, J. G. (2018). Intellectual Capital Management and the Innovation Process: Does One Size Fit All? International Conference on Modelling and Simulation in Management Sciences,
- Samsi, H. (2014). The effect of corporate governance on the relationship between corporate social responsibility disclosure and corporate value. *The Indonesian Accounting Review*, 4(1), 1-14.
- Sanan, N. K. (2016). Board gender diversity, financial and social performance of Indian firms. *Vision*, 20(4), 361-367.
- Saraf, N., Langdon, C. S., & Gosain, S. (2007). IS application capabilities and relational value in interfirm partnerships. *Information systems research*, 18(3), 320-339.
- Saraph, J. V., Benson, P. G., & Schroeder, R. G. (1989). An instrument for measuring the critical factors of quality management. *Decision sciences*, 20(4), 810-829.
- Sardo, F., Serrasqueiro, Z., & Alves, H. (2018). On the relationship between intellectual capital and financial performance: A panel data analysis on SME hotels. *International Journal of Hospitality Management*, 75, 67-74.
- Sarmadi, H., & Karamodin, A. (2020). A novel anomaly detection method based on adaptive Mahalanobis-squared distance and one-class kNN rule for structural health monitoring under environmental effects. *Mechanical Systems and Signal Processing*, 140, 106495.
- Sarstedt, M., Ringle, C. M., Cheah, J.-H., Ting, H., Moisescu, O. I., & Radomir, L. (2019). Structural model robustness checks in PLS-SEM. *Tourism Economics*, 26(4), 531-554. <https://doi.org/10.1177/1354816618823921>
- Sato, Y. (2005). Bank restructuring and financial institution reform in Indonesia. *The Developing Economies*, 43(1), 91-120.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson education.
- Scafarto, V., Ricci, F., & Scafarto, F. (2016). Intellectual capital and firm performance in the global agribusiness industry: the moderating role of human capital. *Journal of Intellectual Capital*.
- Schäuble, J. (2019). The impact of external and internal corporate governance mechanisms on agency costs. *Corporate Governance: The international journal of business in society*, 19(1), 1-22.
- Schiavone, F., Leone, D., Caporuscio, A., & Kumar, A. (2022). Revealing the role of intellectual capital in digitalized health networks. A meso-level analysis for

- building and monitoring a KPI dashboard. *Technological Forecasting and Social Change*, 175, 121325.
- Schlesinger, L. A., & Zornitsky, J. (1991). Job satisfaction, service capability, and customer satisfaction: An examination of linkages and management implications. *Human Resource Planning*, 14(2).
- Schommer, M., Richter, A., & Karna, A. (2019). Does the diversification–firm performance relationship change over time? A meta-analytical review. *Journal of Management Studies*, 56(1), 270-298.
- Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. psychology press.
- Schumpeter, J. (1934). *The theory of economic development* Harvard University Press. Cambridge, MA.
- Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English language teaching*, 5(9), 9-16.
- Sekaran, U. (2000). Measurement: Scaling, reliability, validity Research Methods for Business (Vol. 3, pp. 196-218). In: New York: Wiley & Sons.
- Sekaran, U., & Bougie, R. (2019). *Research methods for business: A skill building approach*. John Wiley & Sons.
- Seleim, A., Ashour, A., & Bontis, N. (2007). Human capital and organizational performance: a study of Egyptian software companies. *Management Decision*.
- Seleim, A. A., & Khalil, O. E. (2011a). Understanding the knowledge management-intellectual capital relationship: a two-way analysis. *Journal of Intellectual Capital*, 12(4), 586-614.
- Seleim, A. A., & Khalil, O. E. (2011b). Understanding the knowledge management-intellectual capital relationship: a two-way analysis. *Journal of Intellectual Capital*.
- Senaviratna, N., & Cooray, T. (2019). Diagnosing multicollinearity of logistic regression model. *Asian Journal of Probability and Statistics*, 1-9.
- Setia-Atmaja, L. Y. (2008). Does board size really matter? Evidence from Australia. *Gadjah Mada International Journal of Business*, 10(3), 331-352.
- Setia-Atmaja, L. Y. (2009). Governance mechanisms and firm value: The impact of ownership concentration and dividends. *Corporate Governance: An International Review*, 17(6), 694-709.
- Sharabati, A. A. A., Jawad, S. N., & Bontis, N. (2010a). Intellectual capital and business performance in the pharmaceutical sector of Jordan. *Management Decision*.
- Sharabati, A. A. A., Jawad, S. N., & Bontis, N. (2010b). Intellectual capital and business performance in the pharmaceutical sector of Jordan. *Management Decision*, 48(1), 105-131.
- Sharma, V., Naiker, V., & Lee, B. (2009). Determinants of audit committee meeting frequency: Evidence from a voluntary governance system. *Accounting Horizons*, 23(3), 245-263.
- Sheth, J. N., Sethia, N. K., & Srinivas, S. (2011). Mindful consumption: a customer-centric approach to sustainability. *Journal of the Academy of Marketing Science*, 39(1), 21-39.

- Shi, W., Hoskisson, R. E., & Zhang, Y. A. (2016). A geopolitical perspective into the opposition to globalizing state-owned enterprises in target states. *Global Strategy Journal*, 6(1), 13-30.
- Shivdasani, A., & Zenner, M. (2004). Best practices in corporate governance: what two decades of research reveals. *Journal of Applied Corporate Finance*, 16(2-3), 29-41.
- Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *the Journal of Finance*, 52(2), 737-783.
- Shultz, S. D., & Luloff, A. (1990). The threat of nonresponse bias to survey research. *Community Development*, 21(2), 104-115.
- Silva, T. M., & Ferreira, A. (2019). Intellectual Capital Sustainability in Brazilian Public Higher Education. In *Intellectual Capital Management as a Driver of Sustainability* (pp. 177-203). Springer.
- Simanavičienė, Ž., Kontautienė, R., & Simanavičius, A. (2019). Assumptions of Corporate Social Responsibility as Competitiveness Factor.
- Slater, S. F., Hult, G. T. M., & Olson, E. M. (2010). Factors influencing the relative importance of marketing strategy creativity and marketing strategy implementation effectiveness. *Industrial Marketing Management*, 39(4), 551-559.
- Smaguc, T. (2021). INTELLECTUAL CAPITAL AND BUSINESS PERFORMANCE: IDENTIFICATION OF DIFFERENT RESEARCH DIRECTIONS. Economic and Social Development (Book of Proceedings), 71st International Scientific Conference on Economic and Social,
- Soares, R., Carter, N. M., & Combopiano, J. (2009). Catalyst census: Fortune 500 women board directors. *Catalyst*.
- Socrates, K., & Gopalakrishna, B. (2020). Indian government interventions in micro, small and medium enterprise development: an enterprise life cycle perspective. *Colombo Business Journal*, 11(1).
- Soomro, B. A., Memon, M., & Shah, N. (2020). Attitudes towards entrepreneurship among the students of Thailand: an entrepreneurial attitude orientation approach. *Education+ Training*.
- Spender, J. C. (1996). Making knowledge the basis of a dynamic theory of the firm. *Strategic management journal*, 17(S2), 45-62.
- Stearns, L. B., & Mizruchi, M. S. (1993). Board composition and corporate financing: The impact of financial institution representation on borrowing. *Academy of Management journal*, 36(3), 603-618.
- Stevens, J. P. (2012). *Applied multivariate statistics for the social sciences*. Routledge.
- Stewart, J., & Munro, L. (2007). The impact of audit committee existence and audit committee meeting frequency on the external audit: Perceptions of Australian auditors. *International Journal of Auditing*, 11(1), 51-69.
- Stone, M. (1974). Cross-validation and multinomial prediction. *Biometrika*, 61(3), 509-515.
- Straub, D., Boudreau, M.-C., & Gefen, D. (2004). Validation guidelines for IS positivist research. *Communications of the Association for Information systems*, 13(1), 24.
- Sturm, M., & Nüesch, S. (2019). Strong shareholder rights, internal capital allocation efficiency, and the moderating role of market competition and external financing needs. *Review of Managerial Science*, 13(1), 93-111.

- Subramaniam, M., & Youndt, M. A. (2005). The influence of intellectual capital on the types of innovative capabilities. *Academy of Management journal*, 48(3), 450-463.
- SUHARMAN, H., ALIPUDIN, A., & HIDAYAH, N. (2022). Corporate Social Responsibility, Intellectual Capital, and Corporate Performance in State-Owned Enterprises. *Quality-Access to Success*, 23(189).
- Surty, M., Yasseen, Y., & Padia, N. (2018). Trends in integrated reporting: a state-owned company analysis. *Southern African Business Review*, 22(1).
- Sytsma, S. E. (2006). Intersexuality, cultural influences, and cultural relativism. In *Ethics and intersex* (pp. 259-270). Springer.
- Szarzec, K., Totleben, B., & Piątek, D. (2022). How do politicians capture a state? Evidence from state-owned enterprises. *East European Politics and Societies*, 36(1), 141-172.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2007). *Using multivariate statistics* (Vol. 5). Pearson Boston, MA.
- Taber, K. S. (2018). The use of Cronbach's alpha when developing and reporting research instruments in science education. *Research in science education*, 48, 1273-1296.
- Taillon, B. J., & Huhmann, B. A. (2019). Strategic consequences of self-service technology evaluations. *Journal of Strategic Marketing*, 27(3), 268-279.
- Tamura, R. (2006). Human capital and economic development. *Journal of development economics*, 79(1), 26-72.
- Tan, B., Igan, D., Peria, M. S. M., Pierri, N., & Presbitero, A. F. (2021). Government intervention and bank markups: Lessons from the global financial crisis for the COVID-19 crisis. *Journal of Banking & Finance*, 133, 106320.
- Tee, C.-M., Wong, W.-Y., & Hooy, C.-W. (2022). Government power and the value of political connections: Evidence from Covid-19 economic lockdowns. *Finance Research Letters*, 47, 102706.
- TEHSEEN, S., QURESHI, Z. H., JOHARA, F., & RAMAYAH, T. (2020). Assessing dimensions of entrepreneurial competencies: A Type II (reflective-formative) measurement approach using PLS-SEM. *Journal of Sustainability Science and Management*, 15(2), 108-145.
- Terjesen, S., Aguilera, R. V., & Lorenz, R. (2015). Legislating a woman's seat on the board: Institutional factors driving gender quotas for boards of directors. *Journal of business ethics*, 128(2), 233-251.
- Thielmann, I., Spadaro, G., & Balliet, D. (2020). Personality and prosocial behavior: A theoretical framework and meta-analysis. *Psychological Bulletin*, 146(1), 30.
- Thompson, C. G., Kim, R. S., Aloe, A. M., & Becker, B. J. (2017). Extracting the variance inflation factor and other multicollinearity diagnostics from typical regression results. *Basic and Applied Social Psychology*, 39(2), 81-90.
- Tihanyi, L., Aguilera, R. V., Heugens, P., van Essen, M., Sauerwald, S., Duran, P., & Turturea, R. (2019). State Ownership and Political Connections. *Journal of Management*, 0149206318822113.
- Ting, I. W. K., & Lean, H. H. (2015). Does government ownership matter? Comparative study between GLCs and NGLCs in Malaysia. *The Singapore Economic Review*, 60(02), 1550019.
- Tong, S., & Junarsinb, E. (2013). Do private firms outperform SOE firms after going public in China given their different governance characteristics? *Gadjah Mada International Journal of Business*, 15(2), 133-170.

- Tonial, G., Cassol, A., Selig, P. M., & Giughiani, E. (2019). Intellectual Capital Management and Sustainability Activities in Brazilian Organizations: A Case Study. In *Intellectual Capital Management as a Driver of Sustainability* (pp. 119-138). Springer.
- Torres, A. I., Ferraz, S. S., & Santos-Rodrigues, H. (2018). The impact of knowledge management factors in organizational sustainable competitive advantage. *Journal of Intellectual Capital*, 19(2), 453-472.
- Tseng, C.-H., Tansuhaj, P. S., & Rose, J. (2004). Are strategic assets contributions or constraints for SMEs to go international? An empirical study of the US manufacturing sector. *Journal of American Academy of Business*, 5(1/2), 246-254.
- Turley, S., & Zaman, M. (2004). The corporate governance effects of audit committees. *Journal of management and governance*, 8(3), 305-332.
- Useem, M. (1984). Book review: Corporate social and political action: Research in corporate and social performance and policy. In: SAGE Publications Sage CA: Los Angeles, CA.
- Uyar, A., Karmani, M., Kuzey, C., Kilic, M., & Yaacoub, C. (2021). Does governance quality explain the sustainability reporting tendency of the public sector? Worldwide evidence. *International Journal of Public Administration*, 1-17.
- Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of financial economics*, 53(1), 113-142.
- Vagliasindi, M. (2008). *Governance arrangements for state owned enterprises* (Vol. 4542). World Bank Publications.
- Van Buren, M. E. (1999). A yardstick for knowledge management. *Training & development*, 53(5), 71-78.
- Van Teijlingen, E. R., Rennie, A. M., Hundley, V., & Graham, W. (2001). The importance of conducting and reporting pilot studies: the example of the Scottish Births Survey. *Journal of advanced nursing*, 34(3), 289-295.
- Vehovar, V., Toepoel, V., & Steinmetz, S. (2016). *Non-probability sampling* (Vol. 1). The Sage handbook of survey methods.
- Venkatraman, N., & Ramanujam, V. (1986). Measurement of business performance in strategy research: A comparison of approaches. *Academy of management review*, 11(4), 801-814.
- Verardi, V., & Croux, C. (2009). Robust regression in Stata. *The Stata Journal*, 9(3), 439-453.
- Vernon, R. (1984). Linking managers with ministers: Dilemmas of the state owned enterprise. *Journal of Policy Analysis and Management*, 4(1), 39-55.
- Vilares, M. J., Almeida, M. H., & Coelho, P. S. (2010). Comparison of likelihood and PLS estimators for structural equation modeling: A simulation with customer satisfaction data. In *Handbook of partial least squares* (pp. 289-305). Springer.
- Vining, A. R., & Boardman, A. E. (1992). Ownership versus competition: Efficiency in public enterprise. *Public Choice*, 73(2), 205-239.
- Wagaman, M. A., & Segal, E. A. (2014). The relationship between empathy and attitudes toward government intervention. *J. Soc. & Soc. Welfare*, 41, 91.
- Wahyudin, A., & Solikhah, B. (2017). Corporate governance implementation rating in Indonesia and its effects on financial performance. *Corporate Governance: The International Journal of Business in Society*.

- Wang, C. L., & Ahmed, P. K. (2004). The development and validation of the organisational innovativeness construct using confirmatory factor analysis. *European Journal of Innovation Management*, 7(4), 303-313.
<https://doi.org/10.1108/14601060410565056>
- Wang, Y., & Clift, B. (2009). Is there a “business case” for board diversity? *Pacific Accounting Review*.
- Wang, Y., Wilson, C., & Li, Y. (2021). Gender attitudes and the effect of board gender diversity on corporate environmental responsibility. *Emerging Markets Review*, 47, 100744.
- Wang, Z., Cai, S., Liang, H., Wang, N., & Xiang, E. (2018). Intellectual capital and firm performance: the mediating role of innovation speed and quality. *The International Journal of Human Resource Management*, 32(6), 1222-1250.
<https://doi.org/10.1080/09585192.2018.1511611>
- Wang, Z., Cai, S., Liang, H., Wang, N., & Xiang, E. (2021). Intellectual capital and firm performance: the mediating role of innovation speed and quality. *The International Journal of Human Resource Management*, 32(6), 1222-1250.
- Wang, Z., Wang, N., Cao, J., & Ye, X. (2016). The impact of intellectual capital–knowledge management strategy fit on firm performance. *Management Decision*.
- Wang, Z., Wang, N., & Liang, H. (2014). Knowledge sharing, intellectual capital and firm performance. *Management Decision*.
- Warr, P., & Clapperton, G. (2010). *The joy of work?: Jobs, happiness, and you*. Routledge.
- Waseem, B., Loo-See, B., Adeel, A., & Riaz, A. (2018). Impact of intellectual capital on innovation capability and organizational performance: An empirical investigation. *Serbian Journal of Management*, 13(2), 365-379.
- Weqar, F., & Haque, S. I. (2022). The influence of intellectual capital on Indian firms’ financial performance. *Int. J. Learning and Intellectual Capital*, 19(2), 169.
- Wernerfelt, B. (1984). A resource-based view of the firm. *Strategic management journal*, 5(2), 171-180.
- Wetzels, M., Odekerken-Schröder, G., & Van Oppen, C. (2009). Using PLS path modeling for assessing hierarchical construct models: Guidelines and empirical illustration. *MIS quarterly*, 177-195.
- Wicaksono, A. (2009). *Corporate governance of state-owned enterprises: investment holding structure of government-linked companies in Singapore and Malaysia and applicability for Indonesian state-owned enterprises* Verlag nicht ermittelbar].
- Withers, M. C., Drnevich, P. L., & Marino, L. (2011). Doing more with less: the disordinal implications of firm age for leveraging capabilities for innovation activity. *Journal of Small Business Management*, 49(4), 515-536.
- Wolf, C. (2009). Does ownership matter? The performance and efficiency of State Oil vs. Private Oil (1987–2006). *Energy Policy*, 37(7), 2642-2652.
- Wong, S. C. (2004). Improving corporate governance in SOEs: An integrated approach. *Corporate Governance International*, 7(2).
- Wong, S. I., & Kuvaas, B. (2018). The empowerment expectation–perception gap: An examination of three alternative models. *Human Resource Management Journal*, 28(2), 272-287.

- Wright, P. M., McMahan, G. C., & McWilliams, A. (1994). Human resources and sustained competitive advantage: a resource-based perspective. *International journal of human resource management*, 5(2), 301-326.
- Wu, J., Wang, C., Hong, J., Piperopoulos, P., & Zhuo, S. (2016). Internationalization and innovation performance of emerging market enterprises: The role of host-country institutional development. *Journal of World Business*, 51(2), 251-263. <https://doi.org/10.1016/j.jwb.2015.09.002>
- Xie, B., Davidson III, W. N., & DaDalt, P. J. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *Journal of Corporate Finance*, 9(3), 295-316.
- Xu, J., & Li, J. (2020). The interrelationship between intellectual capital and firm performance: evidence from China's manufacturing sector. *Journal of Intellectual Capital*.
- Xu, L., Peng, X., & Prybutok, V. (2019). Formative measurements in operations management research: Using partial least squares. *Quality Management Journal*, 26(1), 18-31.
- Xu, S. (2018). *Corporate Social Responsibility and Capital Allocation Efficiency: Evidence from Australia and New Zealand* Auckland University of Technology].
- Yadav, M., & Rahman, Z. (2017). Measuring consumer perception of social media marketing activities in e-commerce industry: Scale development & validation. *Telematics and Informatics*, 34(7), 1294-1307.
- Yamane, T. (1973). Statistics: an introductory analysis-3.
- Yang, J., Ying, L., & Gao, M. (2020). The influence of intelligent manufacturing on financial performance and innovation performance: the case of China. *Enterprise Information Systems*, 14(6), 812-832.
- Yang, Y. (2018). Do aggressive pro forma earnings-reporting firms have difficulty disclosing intellectual capital? Australian evidence. *Journal of Intellectual Capital*, 19(5), 875-896.
- Yarram, S. R., & Adapa, S. (2021). Board gender diversity and corporate social responsibility: Is there a case for critical mass? *Journal of cleaner production*, 278, 123319.
- Yasser, Q. R. (2012). Affects of female directors on firms performance in Pakistan. *Modern Economy*, 3, 817-825.
- Yasser, Q. R., & Al Mamun, A. (2015). The impact of CEO duality attributes on earnings management in the East. *Corporate Governance*.
- Yatim, P., Kent, P., & Clarkson, P. (2006). Governance structures, ethnicity, and audit fees of Malaysian listed firms. *Managerial Auditing Journal*.
- Yawson, A. (2006). Evaluating the characteristics of corporate boards associated with layoff decisions. *Corporate Governance: An International Review*, 14(2), 75-84.
- Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of financial economics*, 40(2), 185-211.
- Yıldız, S., Baştürk, F., & Boz, İ. T. (2014). The effect of leadership and innovativeness on business performance. *Procedia-Social and Behavioral Sciences*, 150, 785-793.
- Yılmaz, N. B. (2019). The Performance Implications of Corporate Political Ties: Government-Business Relations in Turkey. In *Handbook of Research on Contemporary Approaches in Management and Organizational Strategy* (pp. 317-336). IGI Global.

- Young, E. (2006). The knowledge economy'. *Ernst Young, New Zealand*.
- Yu, F., Guo, Y., Lettic, F., & Barnes, S. J. (2019). Regional Anti-Corruption Effort, Political Connections and Firm Innovation Effort: Evidence from China. *Bulletin of Economic Research*.
- Yu, H.-Y., & Main, B. G. (2010). Political intervention, corporate governance and firm performance: An empirical investigation in Japan and Taiwan.
- Yusuf, F., Yousaf, A., & Saeed, A. (2018). Rethinking agency theory in developing countries: A case study of Pakistan. *Accounting Forum*.
<https://doi.org/10.1016/j.accfor.2018.10.002>
- Zaccone, M. C., Santhià, C., & Bosone, M. (2022). How Hybrid Organizations Adopt Circular Economy Models to Foster Sustainable Development. *Sustainability*, 14(5), 2679.
- Zagorchev, A. (2009). The impact of government intervention on corporate governance: Evidence from the EU. In.
- Zahoor, N. (2016). Relationship between Gender Diversity in Top Management Teams and Profitability of Pakistani Firms. *Journal of Resources Development and Management*, 16, 89-93.
- Zahoor, N., & Gerged, A. M. (2021). Relational capital, environmental knowledge integration, and environmental performance of small and medium enterprises in emerging markets. *Business Strategy and the Environment*, 30(8), 3789-3803.
- Zangouinezhad, A., & Moshabaki, A. (2009). The role of structural capital on competitive intelligence. *Industrial Management & Data Systems*.
- Zhang, X.-B., Duc, T. P., Burgos Mutuc, E., & Tsai, F.-S. (2021). Intellectual capital and financial performance: Comparison with financial and Pharmaceutical Industries in Vietnam. *Frontiers in Psychology*, 12, 595615.
- Zhou, N., & Guillén, M. F. (2019). Institutional complementarities and corporate governance: The case of hostile takeover attempts. *Corporate Governance: An International Review*, 27(2), 82-97.
- Zhuang, Y., & Lederer, A. L. (2006). A resource-based view of electronic commerce. *Information & Management*, 43(2), 251-261.
- Zikmund, W. G., Carr, J. C., & Griffin, M. (2013). *Business Research Methods (Book Only)*. Cengage Learning.

APPENDICES A



Ghazali Shafie
Graduate School
of Government

Universiti Utara Malaysia

Dear Respondent,

I am a PhD scholar at University Utara Malaysia. I am conducting research on the Performance of State Owned Enterprises. I request you to participate in this study by answering the attached questionnaire that will hardly take your 10 minutes.

The questionnaire is anonymous and your responses will be used for the academic research purpose only. If you have any questions or concerns about the questionnaire or about participating in this study, you may contact me at naumanyasin@cuivehari.edu.pk. You can also request for research findings through same email address.

Thanks for your cooperation.

Sincerely,

Muhammad Noman Yaseen
Ghazali Shafie Graduate School of Government
Universiti Utara Malaysia,
Sintok, 06010, Kedah DarulAman, Malaysia
Cell # +923341629617
naumanyasin@cuivehari.edu.pk

Instructions:

Please indicate the extent of your opinion with the statements by ‘circling’ the corresponding boxes.

Please indicate the number that indicates the extent to which you agree or disagree with the statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The company's employees undergo continuous training programs every year.	1	2	3	4	5
The company's employees continuously learn from others (colleague and outsiders).	1	2	3	4	5
The company devotes a lot of time and effort to update and develop employees' knowledge and skills.	1	2	3	4	5
The company's market share has been continually improving over the past few years.	1	2	3	4	5
Employees' learning and education affect company's productivity.	1	2	3	4	5
Employees' learning and education affect company's profitability.	1	2	3	4	5
Employees' learning and education affect company's market value (stock value).	1	2	3	4	5
The company's employees are experts in their respective areas.	1	2	3	4	5
The company's employees consistently perform at their best.	1	2	3	4	5
The company's employees have worked for many years in the firm (employee turnover is very low).	1	2	3	4	5
The staffs are highly professional.	1	2	3	4	5
Employees' experience and expertise affect company's productivity	1	2	3	4	5
Employees' experience and expertise affect company's profitability.	1	2	3	4	5
Employees' experience and expertise affect company's market value (stock value).	1	2	3	4	5
The company's employees are considered creative and bright compared with other companies in the industry.	1	2	3	4	5
The company's employees are keen to voice their opinions in group discussions.	1	2	3	4	5
The company's employees usually come up with new ideas.	1	2	3	4	5
The company's employees are continuously encouraged to bring new knowledge and ideas to the business and share their knowledge with their colleagues.	1	2	3	4	5

The company's employees are highly motivated and committed to sharing new great ideas within the company, as it should be.	1	2	3	4	5
Ideas created by company's employees are not quite like those people are expecting.	1	2	3	4	5
The company's employees typically create new ideas by combining existing ideas.	1	2	3	4	5
Employees' creativity affects company's productivity.	1	2	3	4	5
Employees' creativity affects company's profitability.	1	2	3	4	5
Employees' creativity affects company's market value (stock value).	1	2	3	4	5
The company has succession training programs for each and every post/ position (major position).	1	2	3	4	5
The company's culture and atmosphere are supportive and comfortable.	1	2	3	4	5
The company's recruitment programs are comprehensive; and dedicated to hiring the best candidates available.	1	2	3	4	5
The company has a well-developed reward system related to performance.	1	2	3	4	5
The company supports their employees by constantly upgrading their skills and education whenever it is necessary.	1	2	3	4	5
Staffs have enough influence over decisions made within the company.	1	2	3	4	5
The company's systems and programs affect the company's productivity.	1	2	3	4	5
The company's systems and programs affect the company's profitability.	1	2	3	4	5
The company's systems and programs affect the company's market value (stock value)	1	2	3	4	5
The company is currently working on joint projects with many other organizations.	1	2	3	4	5
The company has diverse distribution channels.	1	2	3	4	5
People from outside the company are consulted when the decision is made within the company.	1	2	3	4	5
The company is able to learn and add value through its partners.	1	2	3	4	5
It is important for the company to share knowledge with its partners.	1	2	3	4	5
The company gets as much feedback out of customers as it possibly can under different circumstances.	1	2	3	4	5
Customer knowledge is widely distributed throughout the company.	1	2	3	4	5
Data about customers are continuously updated.	1	2	3	4	5
The company continually meets with customers to find out what they want from it.	1	2	3	4	5
The company's knowledge about customers affect the company's productivity.	1	2	3	4	5

The company's knowledge about customers affect the company's profitability.	1	2	3	4	5
The company's knowledge about customers affect the company's market value (stock value).	1	2	3	4	5
1n new product and service introductions, our company is often first-to-market.	1	2	3	4	5
Our new products and services are often perceived as very novel by customers.	1	2	3	4	5
In comparison with our competitors, our company has introduced more innovative products and services during the past five years.	1	2	3	4	5
In comparison with our competitors, our company has a lower success rate in new products and services launch.	1	2	3	4	5
We are constantly improving our business processes.	1	2	3	4	5
During the past five years, our company has developed many new management approaches.	1	2	3	4	5
When we cannot solve a problem using conventional methods, we improvise on new methods.	1	2	3	4	5
Our company changes production methods at a great speed in comparison with our competitors.	1	2	3	4	5
In comparison with our competitors, our products' most recent marketing program is revolutionary in the market.	1	2	3	4	5
Our recent new products and services are only minor changes from our previous products and services.	1	2	3	4	5
New products and services in our company often take us up against new competitors.	1	2	3	4	5
Committees of my organization are working effectively	1	2	3	4	5
Committees of my organization provide recommendations for better decision-making,	1	2	3	4	5
In my organization committees meeting are more efficient and effective.	1	2	3	4	5
The board of my firms consists of at least one female director	1	2	3	4	5
Female director on our board has different professional experience than men director	1	2	3	4	5
Female director on our board has different values than men.	1	2	3	4	5
Female director has influenced the way the board reviews and guide corporate business strategy on performance	1	2	3	4	5
Female director is equally active in discussions compare to men	1	2	3	4	5
The female director has influenced governance issues which are considered by the board.	1	2	3	4	5
Return on investment of our company is better than that of key competitors	1	2	3	4	5
Return on assets of our company is better than that of key competitors	1	2	3	4	5

Return on sales of our company is better than that of key competitors	1	2	3	4	5
Average profitability of our company is better than that of key competitors	1	2	3	4	5
Profit growth of our company is better than that of key competitors	1	2	3	4	5
Sales growth of our company is better than that of key competitors.	1	2	3	4	5
Customer satisfaction of our company is better than that of key competitors	1	2	3	4	5
Quality development of our company is better than that of key competitors	1	2	3	4	5
Cost management of our company is better than that of key competitors	1	2	3	4	5
Responsiveness of our company is better than that of key competitors	1	2	3	4	5
Productivity of our company is better than that of key competitors.	1	2	3	4	5
There is poor attendance in board meetings.	1	2	3	4	5
All the Board meetings have been relevant to the organization's mandate.	1	2	3	4	5
The Board meetings have been chaired by board members with the relevant qualifications.	1	2	3	4	5
There have been other members attending Board meetings even when they are not gazetted as its members.	1	2	3	4	5
The number of board meetings has an influence on firm performance.	1	2	3	4	5
Smaller board enhances organizational performance	1	2	3	4	5
Larger size boards are more adept in the provision of resources	1	2	3	4	5
Large board of directors is prone to more conflicts among board members which makes it difficult to reach agreements	1	2	3	4	5
The firm benefit from larger boards since they provide effective oversight of management and increase resource availability in the organization which leads to the improvement of organizational performance	1	2	3	4	5
A larger board will bring more expertise and experience to the board	1	2	3	4	5
Please encircle that how much rarely or frequently you agree with the statement	Never	Rarely	Occasionally	Frequently	Very Frequently
Independent directors have meetings to discuss corporate matters formally without management	1	2	3	4	5

Independent directors have meeting to discuss corporate matters informally without management	1	2	3	4	5
Independent directors alter the board meeting agenda set by the CEO	1	2	3	4	5
Independent directors add the board meeting agenda set by the CEO	1	2	3	4	5
Independent directors participate actively in board discussions	1	2	3	4	5
Independent directors disapprove Agenda items at the board meetings	1	2	3	4	5
Individual directors' positions on board meeting agendas recorded in minutes	1	2	3	4	5
There are tendencies that the corporate culture has no positive impact on efforts to increase productivity to win the competition	1	2	3	4	5
There are tendencies that the corporate culture has no positive impact on efforts to improve efficiency of business processes to win the competition	1	2	3	4	5
There are tendencies that the corporate culture has no positive impact on efforts to increase innovation and the ability to win the competition	1	2	3	4	5
The presence of specific tasks that are unexpected from the government to help them in tackling local problems.	1	2	3	4	5
There is presence of a strong correlation between politics and the role of management in the budget proposal	1	2	3	4	5
The company provides donations based on instructions from the government	1	2	3	4	5
CEO & CFO also attend the Committee meetings	1	2	3	4	5
During the last 12 months: the audit Committee meet the External Auditors without CFO and the Head of Internal Audit	1	2	3	4	5
The Audit Committee oversee internal audit functions	1	2	3	4	5
The Audit Committee recommend the external audit appointment and oversee the external audit process	1	2	3	4	5

Demographics of Respondents:

Please tick (X) the appropriate box

1. Gender

1. Male

2. Female

2. Age Group

_____ (Years)

3. Your current position

Secretary	
CEO	
CFO	
Director	

If other, please specify _____

4. Your qualification (excluding professional qualification which are covered in question 5 and question 6 of this questionnaire). Please tick all qualifications that you have.

Graduation	
Master	
M. Phil	
Ph.D	

If other, please specify _____

5. Do you have a professional accounting and/ or auditing qualification?

Yes	
No	

6. Accounting and/or auditing professional qualifications (have completed and passed).

Certified Public Accountant	
Certified Management Accounting	
Chartered Accountant of Pakistan	
Others	

If other, please specify _____

Please feel free to write additional comments:

****Thank you for your kind Cooperation****

APPENDICES B

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.519
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.093	0.288
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.344	0.001
GD -> NFP	0.019	0.817
GI -> FP	0.228	0.011
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.062	0.742
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.173	0.26
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.492
ID -> NFP	0.262	0.039
IOC -> FP	0.144	0.098
IOC -> NFP	-0.142	0.098
MBM -> FP	0.014	0.87
MBM -> NFP	0.134	0.068
MBS -> FP	0	0.994
MBS -> NFP	-0.052	0.314
SC -> FP	-0.14	0.267
SC -> NFP	-0.02	0.849
GC (Chen et al.) -> FP	-0.015	0.927

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.05	0.417
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.128	0.097
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.031	0.713
GI -> FP	0.228	0.011

GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.219	0.259
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.261	0.04
IOC -> FP	0.144	0.097
IOC -> NFP	-0.14	0.102
MBM -> FP	0.014	0.87
MBM -> NFP	0.133	0.072
MBS -> FP	0.001	0.989
MBS -> NFP	-0.054	0.296
SC -> FP	-0.141	0.256
SC -> NFP	-0.013	0.902
GC (Chen et al.) -> NFP	-0.13	0.429

Constructs	Original sample (O)	P values
ACM -> FP	0.043	0.549
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.103	0.241
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.315	0.003
GD -> NFP	0.019	0.817
GI -> FP	0.201	0.027
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.038	0.449
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.109	0.472
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-1.319	0.044
ID -> NFP	0.262	0.039
IOC -> FP	0.148	0.087
IOC -> NFP	-0.142	0.098
MBM -> FP	0.017	0.84
MBM -> NFP	0.134	0.068

MBS -> FP	0.005	0.926
MBS -> NFP	-0.052	0.314
SC -> FP	-0.112	0.372
SC -> NFP	-0.02	0.849
GC (ID) -> FP	1.518	0.051

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.049	0.424
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.129	0.094
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.012	0.889
GI -> FP	0.228	0.011
GI -> NFP	-0.631	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.079	0.105
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.406	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	-0.065	0.902
IOC -> FP	0.144	0.097
IOC -> NFP	-0.141	0.104
MBM -> FP	0.014	0.87
MBM -> NFP	0.134	0.068
MBS -> FP	0.001	0.989
MBS -> NFP	-0.051	0.329
SC -> FP	-0.141	0.256
SC -> NFP	-0.013	0.907
GC (ID) -> NFP	0.41	0.536

Constructs	Original sample (O)	P values
ACM -> FP	0.043	0.541
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.09	0.301
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.342	0.001
GD -> NFP	0.019	0.817

GI -> FP	0.23	0.011
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.043	0.386
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.178	0.247
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.112	0.476
ID -> NFP	0.262	0.039
IOC -> FP	0.146	0.094
IOC -> NFP	-0.142	0.098
MBM -> FP	0.01	0.905
MBM -> NFP	0.134	0.068
MBS -> FP	0.063	0.653
MBS -> NFP	-0.052	0.314
SC -> FP	-0.139	0.261
SC -> NFP	-0.02	0.849
GC (MBS) -> FP	-0.067	0.624

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.046	0.451
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.129	0.092
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.02	0.809
GI -> FP	0.228	0.011
GI -> NFP	-0.627	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.084	0.087
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.394	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.266	0.036
IOC -> FP	0.144	0.097
IOC -> NFP	-0.144	0.095
MBM -> FP	0.014	0.87

MBM -> NFP	0.138	0.059
MBS -> FP	0.001	0.989
MBS -> NFP	-0.127	0.321
SC -> FP	-0.141	0.256
SC -> NFP	-0.022	0.838
GC (MBS) -> NFP	0.08	0.529

Constructs	Original sample (O)	P values
ACM -> FP	-0.07	0.523
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.095	0.281
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.356	0.001
GD -> NFP	0.019	0.817
GI -> FP	0.225	0.011
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.038	0.452
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.183	0.24
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.11	0.491
ID -> NFP	0.262	0.039
IOC -> FP	0.147	0.094
IOC -> NFP	-0.142	0.098
MBM -> FP	0.008	0.922
MBM -> NFP	0.134	0.068
MBS -> FP	-0.001	0.992
MBS -> NFP	-0.052	0.314
SC -> FP	-0.122	0.337
SC -> NFP	-0.02	0.849
GC (ACM) -> FP	0.081	0.195

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.086	0.462
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.131	0.085
CC -> SA	0.831	0
GD -> FP	0.343	0.001

GD -> NFP	0.024	0.78
GI -> FP	0.228	0.011
GI -> NFP	-0.625	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.079	0.116
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.385	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.261	0.04
IOC -> FP	0.144	0.097
IOC -> NFP	-0.141	0.101
MBM -> FP	0.014	0.87
MBM -> NFP	0.132	0.073
MBS -> FP	0.001	0.989
MBS -> NFP	-0.052	0.311
SC -> FP	-0.141	0.256
SC -> NFP	-0.014	0.896
GC (ACM) -> NFP	0.027	0.68

Constructs	Original sample (O)	P values
ACM -> FP	0.044	0.522
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.099	0.26
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.236	0.222
GD -> NFP	0.019	0.817
GI -> FP	0.213	0.016
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.051	0.315
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.16	0.287
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.099	0.531
ID -> NFP	0.262	0.039
IOC -> FP	0.149	0.089
IOC -> NFP	-0.142	0.098

MBM -> FP	0.018	0.833
MBM -> NFP	0.134	0.068
MBS -> FP	0.001	0.988
MBS -> NFP	-0.052	0.314
SC -> FP	-0.124	0.31
SC -> NFP	-0.02	0.849
GC (GD) -> FP	0.093	0.42

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.047	0.439
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.144	0.057
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.229	0.109
GI -> FP	0.228	0.011
GI -> NFP	-0.596	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.071	0.131
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.362	0.002
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.243	0.052
IOC -> FP	0.144	0.097
IOC -> NFP	-0.151	0.072
MBM -> FP	0.014	0.87
MBM -> NFP	0.125	0.091
MBS -> FP	0.001	0.989
MBS -> NFP	-0.052	0.312
SC -> FP	-0.141	0.256
SC -> NFP	-0.053	0.616
GC (GD) -> NFP	-0.182	0.056

Constructs	Original sample (O)	P values
ACM -> FP	0.048	0.492
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.089	0.298
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0

GD -> FP	0.336	0.001
GD -> NFP	0.019	0.817
GI -> FP	0.215	0.019
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.044	0.378
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.095	0.552
ID -> NFP	0.262	0.039
IOC -> FP	0.019	0.897
IOC -> NFP	-0.142	0.098
MBM -> FP	0.014	0.867
MBM -> NFP	0.134	0.068
MBS -> FP	0.007	0.905
MBS -> NFP	-0.052	0.314
SC -> FP	-0.153	0.226
SC -> NFP	-0.02	0.849
GC (IOC) -> FP	0.103	0.236

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.046	0.462
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.134	0.086
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.013	0.88
GI -> FP	0.228	0.011
GI -> NFP	-0.636	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.079	0.106
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.275	0.031
IOC -> FP	0.144	0.097

IOC -> NFP	-0.26	0.1
MBM -> FP	0.014	0.87
MBM -> NFP	0.134	0.065
MBS -> FP	0.001	0.989
MBS -> NFP	-0.046	0.377
SC -> FP	-0.141	0.256
SC -> NFP	-0.032	0.773
GC (IOC) -> NFP	0.098	0.231

Constructs	Original sample (O)	P values
ACM -> FP	0.052	0.454
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.099	0.263
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.313	0.004
GD -> NFP	0.019	0.817
GI -> FP	0.213	0.017
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.047	0.349
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.159	0.301
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.104	0.514
ID -> NFP	0.262	0.039
IOC -> FP	0.155	0.08
IOC -> NFP	-0.142	0.098
MBM -> FP	0.482	0.241
MBM -> NFP	0.134	0.068
MBS -> FP	-0.004	0.947
MBS -> NFP	-0.052	0.314
SC -> FP	-0.112	0.394
SC -> NFP	-0.02	0.849
GC (MBM) -> FP	-0.624	0.238

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.056	0.36
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.139	0.067

CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.051	0.57
GI -> FP	0.228	0.011
GI -> NFP	-0.609	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.08	0.109
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.373	0.002
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.257	0.038
IOC -> FP	0.144	0.097
IOC -> NFP	-0.153	0.069
MBM -> FP	0.014	0.87
MBM -> NFP	-0.351	0.311
MBS -> FP	0.001	0.989
MBS -> NFP	-0.047	0.353
SC -> FP	-0.141	0.256
SC -> NFP	-0.05	0.643
GC (MBM) -> NFP	0.645	0.157

Constructs	Original sample (O)	P values
ACM -> FP	0.046	0.515
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.09	0.31
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.342	0.001
GD -> NFP	0.019	0.817
GI -> FP	0.191	0.195
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.048	0.353
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.172	0.263
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.498
ID -> NFP	0.262	0.039

IOC -> FP	0.145	0.097
IOC -> NFP	-0.142	0.098
MBM -> FP	0.016	0.856
MBM -> NFP	0.134	0.068
MBS -> FP	0.003	0.961
MBS -> NFP	-0.052	0.314
SC -> FP	-0.136	0.264
SC -> NFP	-0.02	0.849
GC (GI) -> FP	0.031	0.762

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.05	0.415
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.127	0.106
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.023	0.785
GI -> FP	0.228	0.011
GI -> NFP	-0.534	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.076	0.114
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.387	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.26	0.038
IOC -> FP	0.144	0.097
IOC -> NFP	-0.144	0.089
MBM -> FP	0.014	0.87
MBM -> NFP	0.129	0.078
MBS -> FP	0.001	0.989
MBS -> NFP	-0.057	0.271
SC -> FP	-0.141	0.256
SC -> NFP	-0.032	0.771
GC (GI) -> NFP	-0.075	0.401

Constructs	Original sample (O)	P values
ACM -> FP	0.046	0.514
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.093	0.287

CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.342	0.001
GD -> NFP	0.019	0.817
GI -> FP	0.246	0.007
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.05	0.321
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.181	0.243
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.107	0.497
ID -> NFP	0.262	0.039
IOC -> FP	0.126	0.185
IOC -> NFP	-0.142	0.098
MBM -> FP	-0.002	0.986
MBM -> NFP	0.134	0.068
MBS -> FP	0.003	0.956
MBS -> NFP	-0.052	0.314
SC -> FP	0.256	0.587
SC -> NFP	-0.02	0.849
GC (SC) -> FP	-0.493	0.402

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.048	0.426
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.131	0.087
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.018	0.825
GI -> FP	0.228	0.011
GI -> NFP	-0.593	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.089	0.064
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.374	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491

ID -> NFP	0.264	0.035
IOC -> FP	0.144	0.097
IOC -> NFP	-0.174	0.048
MBM -> FP	0.014	0.87
MBM -> NFP	0.107	0.149
MBS -> FP	0.001	0.989
MBS -> NFP	-0.048	0.354
SC -> FP	-0.141	0.256
SC -> NFP	0.665	0.153
GC (SC) -> NFP	-0.852	0.137

Constructs	Original sample (O)	P values
ACM -> FP	0.048	0.489
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	0.08	0.365
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.326	0.002
GD -> NFP	0.019	0.817
GI -> FP	0.21	0.017
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.056	0.259
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.368	0.06
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.091	0.566
ID -> NFP	0.262	0.039
IOC -> FP	0.149	0.086
IOC -> NFP	-0.142	0.098
MBM -> FP	0.019	0.824
MBM -> NFP	0.134	0.068
MBS -> FP	-0.004	0.937
MBS -> NFP	-0.052	0.314
SC -> FP	-0.133	0.271
SC -> NFP	-0.02	0.849
GC (IC) -> FP	0.202	0.039

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.049	0.423
CC -> CK	0.909	0

CC -> FP	0.092	0.289
CC -> NFP	-0.129	0.096
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.023	0.787
GI -> FP	0.228	0.011
GI -> NFP	-0.621	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.079	0.111
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.428	0.002
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.258	0.043
IOC -> FP	0.144	0.097
IOC -> NFP	-0.143	0.094
MBM -> FP	0.014	0.87
MBM -> NFP	0.133	0.071
MBS -> FP	0.001	0.989
MBS -> NFP	-0.051	0.325
SC -> FP	-0.141	0.256
SC -> NFP	-0.022	0.838
GC (IC) -> NFP	-0.041	0.553

Constructs	Original sample (O)	P values
ACM -> FP	0.043	0.532
ACM -> NFP	-0.048	0.428
CC -> CK	0.909	0
CC -> FP	-0.125	0.389
CC -> NFP	-0.132	0.085
CC -> SA	0.831	0
GD -> FP	0.339	0.001
GD -> NFP	0.019	0.817
GI -> FP	0.211	0.019
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.044	0.365
HC -> LE	0.951	0
HC -> NFP	0.081	0.097
IC -> FP	-0.171	0.267
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0

ID -> FP	-0.096	0.545
ID -> NFP	0.262	0.039
IOC -> FP	0.139	0.114
IOC -> NFP	-0.142	0.098
MBM -> FP	0.021	0.808
MBM -> NFP	0.134	0.068
MBS -> FP	0.002	0.976
MBS -> NFP	-0.052	0.314
SC -> FP	-0.127	0.296
SC -> NFP	-0.02	0.849
GC (CC) -> FP	0.215	0.021

Constructs	Original sample (O)	P values
ACM -> FP	0.045	0.517
ACM -> NFP	-0.048	0.431
CC -> CK	0.909	0
CC -> FP	0.092	0.289
CC -> NFP	-0.134	0.276
CC -> SA	0.831	0
GD -> FP	0.343	0.001
GD -> NFP	0.019	0.818
GI -> FP	0.228	0.011
GI -> NFP	-0.624	0
HC -> C	0.915	0
HC -> FP	0.046	0.363
HC -> LE	0.951	0
HC -> NFP	0.081	0.099
IC -> FP	-0.173	0.259
IC -> MI	0.9	0
IC -> NFP	0.389	0.001
IC -> PI	0.797	0
ID -> FP	-0.108	0.491
ID -> NFP	0.262	0.039
IOC -> FP	0.144	0.097
IOC -> NFP	-0.142	0.101
MBM -> FP	0.014	0.87
MBM -> NFP	0.134	0.068
MBS -> FP	0.001	0.989
MBS -> NFP	-0.052	0.317
SC -> FP	-0.141	0.256
SC -> NFP	-0.02	0.851
GC (CC) -> NFP	0.002	0.977

Constructs	Original sample (O)	P values
ACM -> FP	-0.043	0.707

ACM -> NFP	-0.113	0.341
CC -> CK	0.909	0
CC -> FP	-0.083	0.625
CC -> NFP	-0.214	0.104
CC -> SA	0.831	0
GD -> FP	0.364	0.089
GD -> NFP	0.234	0.168
GI -> FP	0.255	0.118
GI -> NFP	-0.539	0
HC -> C	0.915	0
HC -> FP	0.072	0.701
HC -> LE	0.951	0
HC -> NFP	0.29	0.159
IC -> FP	-0.256	0.242
IC -> MI	0.9	0
IC -> NFP	0.348	0.035
IC -> PI	0.797	0
ID -> FP	-0.92	0.216
ID -> NFP	0.082	0.888
IOC -> FP	0.048	0.773
IOC -> NFP	-0.372	0.02
MBM -> FP	0.449	0.371
MBM -> NFP	-0.25	0.525
MBS -> FP	0.08	0.582
MBS -> NFP	-0.162	0.246
SC -> FP	0.522	0.33
SC -> NFP	0.585	0.239
GC (Chen et al.) -> FP	-0.033	0.847
GC (Chen et al.) -> NFP	-0.205	0.252
GC (ID) -> FP	1.045	0.235
GC (ID) -> NFP	0.24	0.739
GC (MBS) -> FP	-0.086	0.551
GC (MBS) -> NFP	0.128	0.363
GC (ACM) -> FP	0.065	0.318
GC (ACM) -> NFP	0.046	0.491
GC (GD) -> FP	-0.064	0.665
GC (GD) -> NFP	-0.157	0.229
GC (IOC) -> FP	0.066	0.522
GC (IOC) -> NFP	0.15	0.08
GC (MBM) -> FP	-0.616	0.346
GC (MBM) -> NFP	0.475	0.362
GC (GI) -> FP	-0.044	0.716
GC (GI) -> NFP	-0.048	0.6
GC (SC) -> FP	-0.754	0.261
GC (SC) -> NFP	-0.81	0.182
GC (IC) -> FP	0.111	0.38

GC (IC) -> NFP	0.007	0.939
GC (CC) -> FP	0.177	0.123
GC (CC) -> NFP	0.079	0.359

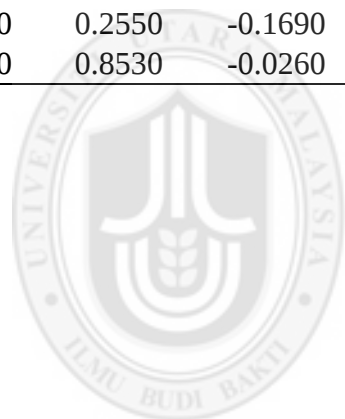




APPENDICES D

Constructs	Complete Fimix		Fimix 1		Fimix 2		Age 1		Age 2	
	Original sample (O)	P values	Original sample (O)	P values	Original sample (O)	P values	Original sample (O)	P values	Original sample (O)	P values
ACM -> FP	0.0460	0.5110	0.0720	0.4600	0.0490	0.7650	-0.0560	0.7540	-0.0290	0.6830
ACM -> NFP	-0.0470	0.4410	-0.0340	0.6770	-0.0390	0.2780	0.0280	0.8650	-0.0260	0.7030
CC -> CK	0.9090	0.0000	0.8630	0.0000	0.9640	0.0000	0.8790	0.0000	0.9000	0.0000
CC -> FP	0.0930	0.2880	-0.0040	0.9720	0.7110	0.0530	0.0770	0.5960	0.1040	0.3560
CC -> NFP	-0.1300	0.0880	-0.1490	0.0530	0.1110	0.2300	-0.0570	0.6580	-0.2560	0.0400
CC -> SA	0.8310	0.0000	0.7120	0.0000	0.9410	0.0000	0.7450	0.0000	0.8360	0.0000
GD -> FP	0.3430	0.0010	0.3580	0.0040	0.3510	0.1100	0.0890	0.7430	0.5490	0.0000
GD -> NFP	0.0170	0.8350	0.0290	0.7530	0.1360	0.0830	0.1360	0.5630	0.0080	0.9330
GI -> FP	0.2280	0.0110	0.2120	0.0390	0.0970	0.8050	0.3820	0.0710	0.1170	0.1810
GI -> NFP	-0.6230	0.0000	-0.5560	0.0000	-1.1790	0.0000	-0.4620	0.0290	-0.6350	0.0000
HC -> C	0.8970	0.0000	0.8530	0.0000	0.9730	0.0000	0.8000	0.0000	0.9160	0.0000
HC -> FP	0.0450	0.3870	-0.0020	0.9810	0.2530	0.0040	-0.1510	0.2450	0.1400	0.0110
HC -> LE	0.9520	0.0000	0.9570	0.0000	0.9420	0.0000	0.9260	0.0000	0.9610	0.0000
HC -> NFP	0.0750	0.1270	0.1170	0.1010	0.0000	0.9900	0.1220	0.5030	0.0650	0.2120
IC -> FP	-0.1740	0.2580	-0.1920	0.2170	-0.5840	0.2160	-0.1500	0.6640	-0.0360	0.8040
IC -> MI	0.9000	0.0000	0.8660	0.0000	0.9740	0.0000	0.9150	0.0000	0.9170	0.0000
IC -> NFP	0.3880	0.0010	0.2840	0.0120	-0.1030	0.4650	0.0250	0.9380	0.3930	0.0080
IC -> PI	0.7970	0.0000	0.6820	0.0000	0.9640	0.0000	0.5160	0.0980	0.8550	0.0000
ID -> FP	-0.1080	0.4940	-0.1300	0.4470	-0.0050	0.9890	-0.0990	0.7240	-0.0050	0.9740

ID -> NFP	0.2630	0.0390	0.2150	0.0660	-0.0080	0.9490	0.2570	0.3110	0.2260	0.1460
IOC -> FP	0.1450	0.0960	0.0890	0.4240	0.3640	0.0660	-0.0090	0.9720	0.1290	0.2450
IOC -> NFP	-0.1420	0.1000	-0.1830	0.0590	0.1110	0.0690	0.2960	0.2850	-0.2380	0.0170
MBM -> FP	0.0140	0.8690	0.0530	0.6240	-0.1380	0.6120	0.1040	0.6880	0.0790	0.3830
MBM -> NFP	0.1340	0.0670	0.0920	0.2820	0.1960	0.0230	0.2820	0.2080	0.0330	0.6840
MBS -> FP	0.0010	0.9890	0.0600	0.4340	-0.0600	0.5970	0.0430	0.8050	-0.0020	0.9710
MBS -> NFP	-0.0520	0.3070	-0.0830	0.1840	-0.0060	0.8330	-0.1620	0.3490	-0.0370	0.4780
SC -> FP	-0.1400	0.2550	-0.1690	0.2340	0.0320	0.9330	-0.2620	0.2450	-0.1700	0.3190
SC -> NFP	-0.0200	0.8530	-0.0260	0.8030	-0.2010	0.0330	0.1000	0.6530	-0.0620	0.6530



UUM
Universiti Utara Malaysia