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Challenging the Resource Curse Narrative: The Case of Qatar's Sovereign Wealth Fund and Education Strategy

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**Challenging the Resource Curse Narrative:
The Case of Qatar's Sovereign Wealth Fund and
Education Strategy**

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Thesis submitted for the degree of PhD

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School of Finance and Management

To my mother, my love, my all,
for it is you who gives me light

Abstract

For much of the last century, the resource curse theory has been used to explain the volatile and unproductive economic performance of resource-abundant states. By highlighting the negative institutional, political, and economic externalities associated with the management of lucrative natural resource wealth, the theory adopts a reductionist approach that ultimately assumes away the possibility of successful wealth management and economic development. By highlighting the dynamic and multi-faceted nature of institutional governance, this thesis argues that sound governance along with substantial improvement in the quality of institutions can challenge the conventional wisdom of the resource curse narrative. By focusing on the case study of Qatar, this thesis considers institutions to be a vital component in the transformative needs of resource-abundant states. The analysis focuses on the case study of the country's sovereign wealth fund (Qatar Investment Authority - QIA) and its educational strategy as two cases that question the assumptions of the resource curse model. The thesis proposes that the operations and investment strategies of the QIA as well as Qatar's drive to revamp its educational strategy in recent years suggest that the country has strived to chart a path that is distinct from the predictions of the resource curse theory. Although developing such strategies has its share of challenges, this study highlights the significant role and dynamic nature of key institutions in avoiding the curse associated with abundant oil and gas resources.

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Table of Contents

Abstract.....	4
Acknowledgements	5
Acronyms and Abbreviations	8
List of Tables	9
List of Figures.....	10
1. Introduction.....	11
1.1. Research Methodology	16
1.2. Research Framework	19
1.3. The Structure of the Thesis	21
2. The Resource Curse Theory	24
2.0.1. What the Resource Curse Theory Needs	29
2.0.2. Critique of the Resource Curse Theory	31
2.1. The Dutch Disease – A Symptom of the Curse	34
2.2. The Rentier Model	37
2.3. The Quality of Institutions	40
2.4. Rethinking the Curse.....	48
3. Sovereign Wealth Funds – Cursed?	50
3.1. The State Apparatus and the Performance of SWFs	58
3.2. SWFs’ Role in Enhancing Transparency and Accountability.....	63
3.3. Wealth Absorption Through SWFs.....	71
3.4. SWFs and Economic Diversification.....	74
3.5. Rethinking the Resource Curse Through SWFs	80
4. Investment Pragmatism as the Engine of Economic Growth	85
4.1. SWFs Operational Governance Structure	90
4.2. The Countercyclical Rule-Based Framework	98
4.2.1. Approaches to Integrate SWF Into Fiscal Framework	99
4.3. The Norwegian Model as a Blueprint	102
4.3.1. Norway’s Investment Strategies	107
4.3.2. The Norwegian Model Deconstructed.....	109
4.3.3. A Blueprint for SWFs or Uniquely Norwegian?	111
4.4. The Blessings of Oil Rents	114
5. The Case Study of Qatar	116
5.1. The Hydrocarbon Economy	121
5.1.1. The Impact of the 2017 Blockade.....	126
5.2. The Qatar Investment Authority	128
5.2.1. Governance and Institutional Structure	129
5.2.2. Investment Strategy and Allocation Patterns.....	131
5.2.3. Long-Term Vision	136
5.2.4. Trophy Investments as a Branding Strategy	141
5.3. The QIA Investments Post-2017: A Needed Boost	145

5.4. Non-resource-Abundant SWFs Performance - The Case of GIC	150
5.5. The Macroeconomics of QIA and GIC.....	163
5.5.1. Analysing SWFs' Performance Indicators	168
5.5.2. Financial, Economic and Operational Performance	174
5.6. Wealth Management Deconstructed	176
<u>6. Educating Your Way Out of the Resource Curse.....</u>	<u>178</u>
6.1. Low Educational Attainment and Resource Riches Debunked	182
6.2. Is It Correlation or Causation?	186
6.3. Policy Choices Towards Quality Education	188
6.3.1. Shortcomings of the Discourse	190
6.3.2. Contextualising Education.....	192
6.3.3. Can We Capture the Capital in Human Capital?	193
6.4. History of Education in Qatar	199
6.5. Re-Inventing Qatar's Education System.....	200
6.5.1. Out With the New, in With the Old	203
6.6. Satisfying the Labour Market Needs Through Human Capital	206
6.6.1. Syncing the Labour Market	209
6.7. The Exposed Reality	220
6.8. Is It a Change in Rhetoric or Reality?.....	221
<u>7. Rethinking the Resource Curse – Final Thoughts</u>	<u>224</u>
<u>Appendix.....</u>	<u>234</u>
<u>Interviews.....</u>	<u>239</u>
<u>Database.....</u>	<u>239</u>
<u>References.....</u>	<u>239</u>

Acronyms and Abbreviations

ADIA	Abu Dhabi Investment Authority
BTI	Bertelsmann Transformation Index
CEO	Chief Executive Officer
EDI	Education for All Development Index
EIA	Energy Information Administration
GAPP	Generally Accepted Principles and Practices
GDP	Gross Domestic Product
GIC	Government of Singapore Investment Corporation
GNP	Gross National Product
GPF	Government Pension Fund Global
GPI	Growth Promise Indicators
IBC	International Branch Campuses
IFSWF	International Forum of Sovereign Wealth Funds
IMF	International Monetary Fund
KIA	Kuwait Investment Authority
LNG	Liquefied Natural Gas
LVMH	Louis Vuitton Moët Hennessy
MENA	Middle East and North Africa
NBIM	Norges Bank Investment Management
OPEC	Organization of the Petroleum Exporting Countries
QIA	Qatar Investment Authority
SAA	Strategic Asset Allocation
SP	Santiago Principles
SWF	Sovereign Wealth Fund
SWFI	Sovereign Wealth Fund Institute
UNDP	United Nations Development Programme
WGI	Worldwide Governance Indicators

List of Tables

Table 3.1: Ranking of the Top Ten Largest Sovereign Wealth Funds by Total Assets	52
Table 3.2: Linaburg-Maduell Transparency Index	65
Table 3.3: Transparency Scores of SWFs.....	66
Table 3.4: Sovereign Wealth Funds.....	234
Table 4.1: Characteristics of SWFs	93
Table 4.2: Norway’s Resource Governance Index and Component Scores	104
Table 5.1: Qatar Public Budget for 2015–2020	116
Table 5.2: Foreign Reserves to QIA Assets (Billions of US Dollars)	126
Table 5.3: Ranking of the Top Ten Largest Sovereign Wealth Funds in the Middle East by Total Assets.....	128
Table 5.4: Break Down of QIA’s Total Value Held in Invested Industries	132
Table 5.5: Top Ten QIA Holdings.....	133
Table 5.6: Public Investments From 2016 to 2020	135
Table 5.7: A Comparison of QIA’s Portfolio of Barclays When the Security Was First Purchased in 2008 in Comparison to 2021	138
Table 5.8: The First Securities Purchased by QIA	140
Table 5.9: Securities That Have Been Sold by QIA	143
Table 5.10: QIA Investment Portfolio	148
Table 5.11: Singapore Public Budget for the Years 2017–2020	152
Table 5.12: Investment Performance of GIC Over 20 Years for the Year 2013	159
Table 5.13: Investment Performance of GIC Over 20 Years for the Year 2019	160
Table 5.14: Break Down of GIC’s Total Value Held in Invested Industries.....	161
Table 5.15: Top Ten GIC Holdings	162
Table 5.16: Rankings of Small Open Economies SWFs by Total Assets	163
Table 5.17: Size of SWF as part of GDP	164
Table 5.18: Characteristics of Qatar and Singapore SWF	165
Table 5.19: QIA’s Largest Investment Shares	166
Table 5.20: Comparing Resource and Non-Resource-Based Sovereign Wealth Management	167
Table 5.21: Institutional Quality Measurements for QIA and GIC	170
Table 5.22: A Simplified Form of Performance Benchmark.....	174
Table 6.1: Human Capital Index	194
Table 6.2: Indicators for Qatar from the Global Competitiveness Index	195
Table 6.3: UNDP Human Development Index Rankings, 2013–2021	196
Table 6.4: The Education for All Development Index and Components for 2011	198
Table 6.5: Reasons for Being Unemployed	214
Table 6.6: The Plans of the Qatar National Development Strategy 2011–2016 for the Labour Market.....	219

List of Figures

Figure 3.1: Number of Established Sovereign Wealth Funds.....	51
Figure 3.2: The Asset Allocation of SWFs 2002–2014.....	52
Figure 3.3: The Average Asset Allocation for SWFs	78
Figure 4.1: Norway’s Resource Governance Index Subcomponent Score	105
Figure 5.1: Qatar’s Revenue Breakdown 2018–2020.....	117
Figure 5.2: Qatar’s Hydrocarbons and Non-hydrocarbons, Share in Real and Nominal GDP%	119
Figure 5.3: Qatar’s Real GDP Composition (%).....	120
Figure 5.4: Qatar’s Annual GDP Growth From 2001 to 2021	121
Figure 5.5: The Brent Crude Oil Price in US Dollars per Barrel for the Years 2000–2019..	122
Figure 5.6: The Percentage of Oil and Gas Rents as a Percentage of GDP.....	124
Figure 5.7: The Percentage of Oil and Gas Revenues as Part of Total Government Revenues	125
Figure 5.8: The Geographical Distribution of the QIA Portfolio	131
Figure 5.9: The Portfolio Distribution of QIA.....	132
Figure 5.10: The Value Held by QIA From 2010 to 2020 of Vinci SA	137
Figure 5.11: A Breakdown of the Singaporean Economic Structure According to Their GDP Contribution.....	151
Figure 5.12: Singapore’s Annual GDP Growth From 2001–2021	154
Figure 5.13: The Geographical Distribution of the GIC Portfolio.....	155
Figure 5.14: The Policy Portfolio of GIC	158
Figure 5.15: Sovereign Wealth Fund Real Estate Holdings	172
Figure 6.1: Qatar UNDP Human Development Index, 1990–2021.....	197
Figure 6.2: The Relative Distribution of the Labour Force (15 Years +), for 2020	211
Figure 6.3: The Labour Force Relative Distribution by Skill Level, 2020.....	212
Figure 6.4: The Qatar Unemployment (% of total labour force)	213
Figure 6.5: The Unemployment (% of total labour force) in Gulf Countries for 2021	213
Figure 6.6: The Percentage Distribution of the Unemployed (15 years +) by Educational Status from 2016–2020.....	215
Figure 6.7: Percentage Distribution of Economically Inactive Population (15 Years+) by Nationality and Gender for Inactivity, 2020	216
Figure 6.8: The Labour Force with Advanced Education (% of Total Working-age Population with Advanced Education	217

1. Introduction

Oil, an essential factor of production and the single most used commodity worldwide, has been at the centre of an extensive scholarly debate. Its importance is evident worldwide as changes in output levels significantly impact global consumption. As more states are becoming oil exporters and commodity prices remain high, it is only natural that we question the growth and development of resource-abundant states. Increased global demand for resources such as oil and gas suggest that natural resource wealth constitutes a large share of national income for resource-abundant states. Paradoxically, however, within mainstream academic debates, resources are treated as a curse to resource-abundant states, where it is believed that a negative relationship exists between resource abundance and economic growth. The commodity that can allow states, whether developed or developing, to achieve their growth objectives and developmental needs, is also seen as a curse to its home country. The idea that an abundance of resources bestowed upon a state delivers anything other than benefits is counterintuitive.

The term ‘resource curse’ was first devised by Auty (1993) to explain how resource-abundant states often develop slowly, in comparison to states that are not rich in resources. Yet, resource wealth has provided resource-abundant states with the finance needed for their development prospects. Most importantly, resource wealth has allowed resource-abundant states to establish wealth funds, also known as sovereign wealth funds (SWFs). Such funds gained a maelstrom of attention during the global financial crisis of 2008, when certain resource-rich states’ SWFs played a part in alleviating the liquidity needs of some of the more developed economies during a period of financial turmoil. The financial crisis was a critical time for SWFs, as it situated them within a wider global financial system as they injected substantial capital into global financial institutions that no other institutional investor could supply, thereby providing stability to the financial market. Oil-rich states took advantage of their accumulated resource revenue to gain a strategic position on the global stage. This was made possible mainly by historic increases in oil prices, which allowed oil exporting countries to accumulate revenue and expand their wealth funds. SWFs are no new phenomena, but the rapid growth in their size and assets highlights a shift in the direction of the movement of capital around the world that was previously only limited to developed countries. The rise of commodities and emerging markets has changed past trends while creating a new dynamic in the global capital market.

SWFs have gained eminence as international financial institutions, largely due to their multi-faceted aim of reducing oil price volatility in state revenues by diversifying investments across different industries. This has left an impression on the global financial market and its politics. High oil prices, financial globalisation, and global imbalances have led to the rapid accumulation of foreign assets, particularly by oil exporting states. With oil price volatility increasing along with the global demand for energy, oil producers are better known for political instability and low economic performance than for sound resource management policies. Absorbing capital inflows from resource rents posits a challenge to states endowed with large oil and gas reserves.

The resource curse attaches a conception to oil exporters as definitive losers, which comes from the archaic and static-based assumptions of the resource curse theory. Based on the premise that oil is a finite commodity, when oil rents would have eroded in the long term, the importance of oil as a strategic commodity will no longer hold. This will particularly affect the geopolitical position of the large oil exporters of the Middle East and North Africa. The idea that plenty of anything is a bad notion is symbolic of the first oil price shock of 1973–74 when prices of crude oil increased four-fold in three months, with major implications for oil-rich states. This period marked the largest transfer of wealth in the last century. The oil price shocks of the 1970s and early 1980s altered economic policy and macroeconomic relationships in the global economy. States rich in oil experienced a deluge of wealth, which increased borrowing and led to structural changes. It was possible for oil-exporting states to accumulate resource rents that they were previously unable to accrue.

The resource curse theory has been a significant contributor to this exceptionalist view of oil-rich states. This othering has attached significant beliefs to oil-abundant states as incapable of effective wealth management due to the dynamics of the state. In fact, the rentier state theory remains the main conceptual theory to contribute and later develop the theory to include post-rentier state theory, whereas the resource curse theory has primarily been occupied with data mining without the effort to develop or build the theory. The resource curse theory needs to move beyond categorising oil-abundant states in the singular and contribute to the development of the theory. Exploring ways in which oil-rich states have defied elements of the resource curse broadens the parameters of the theory and de-shackles from the inherent curse associated with resource riches. The connotations of othering resource-abundance especially the Middle Eastern states which are one of the largest exporters is characterised by Halliday (2005, 10) as

‘regional narcissism’ which stems from the assumptions that ‘everything that happens in the region is somehow dissimilar to that which takes place elsewhere’. This is precisely the argument of the resource curse theory that believes in the effective governance of non-resource-abundant states. Hoffmann (2018, 94) makes a compelling case for instigating the need to question the oriental beliefs that ‘assumes that a scarce nature is mismanaged by societies and states overall incapable of negotiating modernity’. Therefore, exploring institutions and the participation of oil-abundant states in the global political economy is an opportunity to conceptualise the theory through a different lens but also to de-colonise beliefs of institutions and governance associated with resource-abundance and contest and overcome the conceptual binaries of the resource curse theory. There is a need to challenge the rhetoric on resource-abundant states and in particular ‘challenge accounts which see Middle Eastern states as self-contained boxes divorced from the global political economy’ (Baumann & Roccu, 2023: 4). The developments that occurred as a result of resource wealth must not be denied and as Hanieh (2018, 18) puts it ‘an emphasis on processes, practices, and interconnections, rather than on the supposedly bounded, pregiven and discrete spatial units through which we are accustomed to viewing the world’ should be explored.

The 1970s and 1980s were prosperous for the Middle Eastern states whose oil wealth was the largest. However, this had a larger implication on the global economic order, as it led hegemon such as the US to be distraught by the rise in oil prices, challenging the common rhetoric that draws the line between developed states challenging developing states. The global economic system has undergone changes that have altered the role of one global hegemon through the emergence of strong economic powers. An analysis of the implications of change in the balance of economic power by Castelli and Scacciavillani (2012) argue that there is a shift in the economic centre of gravity from developed economies to developing resource-rich economies. This suggests that the increased prominence of SWFs is a result of a replacement in the economic weight and represents a ‘secular shift to a multipolar global economy’ (2012, 1). Oil-rich states have been able to control a large portion of investments due to their build-up of sovereign wealth; such geo-economic tools are central to the state’s position in the global financial system (Blackwill & Harris, 2016). Accumulated resource wealth allowed oil-rich states to take on a prominent position of bailing out a distressed global financial market during the global financial crisis of 2008, filling a financial gap that no other domestic state institution could satiate. Nevertheless, it is in fact, substantial changes in the global system that accentuate ideational shifts in power. This shift highlights a significant change in the balance of power

through economic dominance. Oil-rich states have sought lucrative investments in the West to invest in their sizable SWFs, in an effort to lay the foundations for long-term sustainable development. SWFs' ability to invest in diverse sectors of the economy along with concomitant shifts in fiscal and monetary policies only account for some of the benefits of the fund. This would have not been possible if it were not for accumulated resource wealth, which gave oil-rich states the opportunity to enter a global market that they may have not been able to without wealth accumulation.

The global positioning of the funds and their increased importance during the financial crisis established the funds as powerful institutions in the global financial system. Hatton and Pistor (2011) suggest that as a result of the position that SWFs assumed during the financial crisis, they established new global arrangements. SWFs became an important force in the global financial market because of their ability to invest in times of uncertainty when private domestic investors took flight (Hatton & Pistor, 2011). The willingness of the funds to take a critical position during times of turmoil is due to the sterilised returns concentrated in SWFs, which allows for the strategic deployment of wealth.

The oil price shocks allowed for an unprecedented accumulation of wealth by oil-rich states; yet many studies seem to draw their arguments from data from the first oil price shock, arguing that a negative correlation exists between economic performance and resource-abundant states. This in large was due to the resource price escalation that occurred in the 1970s, which constituted an exogenous windfall boom; the ephemeral effects of the boom were not considered, which in effect explains the poor use of gains (Wright & Czelusta, 2004). This is the conventional way of explaining the resource curse theory. This perspective also demonstrates why statistical research remains contested over the explanation of the resource curse for well over a decade (Lederman & Maloney, 2007). According to Auty (2010), who devised the actual term, 'resource curse' is a manifestation of a broader rent curse largely embedded in policy failure. Much of the research of the past century has been occupied with trying to explain the volatile and unproductive performance of resource-abundant states with little interest in trying to decipher the negative externalities that have been associated with resource abundance. This is not limited to economic factors but also includes other factors such as education and human capital development. This will be explored further in Chapter Six of the thesis which focuses on the human capital development strategy in Qatar and its evolution in recent years.

Introducing SWFs into the discourse on resource curse theory represents a fundamental shift in the paradigm, from being entrenched in a stagnant theory to expanding the scope of the literature to include another dimension of institutions. This will effectively shed light on the burden placed on oil-rich states' ability to effectively invest, finance, and utilise oil wealth in the present. For a future that is less reliant on oil, regardless of its availability, the diversification prospect of oil-rich states is tied to their overall wealth management. By highlighting the dynamic and multi-faceted nature of institutional governance, this thesis argues that sound governance complemented with quality institutions can challenge the conventional wisdom of the resource curse narrative. The resource curse hypothesis will be analysed by focusing on the role of the state in directing its wealth; this will shed light on methods of mitigating resource curse symptoms through sound governance of resource wealth and quality institutions.

While accounts on SWFs offer insight into their role as investment vehicles, they do not position SWFs within a theoretical framework that goes far beyond treating them as investment vehicles but as quality institutions that can essentially work as a corrective tool for sound wealth management. Within such a dynamic, SWFs impute a rationale to resource rent allocation that responds to the issue of sound governance in the resource curse theory. By using an analysis of SWFs to evaluate the validity of the resource curse argument, this thesis will question its various assumptions and theoretical and empirical foundations. Focusing on Qatar as a case study, this thesis analyses the SWF of the country while also highlighting elements of Singapore's SWF as a relevant case vis-à-vis Qatar. The resource curse theory believes in the effective governance of non-resource-rich states and thus elements of the Singaporean SWF sheds light on whether governance differs between the two funds. The problematic nature of the resource curse narrative lies in the inevitability that it attaches to resources and low economic performance. This is problematic on many levels as it considers resource-abundant states as homogenous entities that are stagnant and incapable of development or effective governance. This thesis proposes that the operations and investment strategies of the QIA as well as Qatar's drive to revamp its educational strategy in recent years are suggestive of an oil-rich state that has strived to chart a path distinct from the predictions of the resource curse theory. Although developing such strategies has its share of challenges, it highlights the significant role and dynamic nature of key institutions in avoiding the curse associated with abundant oil and gas resources.

1.1. Research Methodology

The existing literature on resource curse theory has limited the potential of resource-rich states by placing them all under the influence of low economic development. Sachs and Warner (1995) have been key scholars in shaping the resource curse discourse. At the time, a significant amount of research focused on the same themes, and the paper foreshadowed the inverse relationship between resource wealth and economic development. This later set the stage for scholars to continue and to add to the same realm of research. Sachs and Warner's early study and scholarly influence demonstrates the transition in the discourse from their early study in 1995, which was adamant that the testable hypotheses in the study were significant and resource abundance implied an inverse relationship to economic development, to their revised study in 2001 where they note that the resource curse is not 'bulletproof'. Understanding the dominance of the resource curse literature in the nineties and early twentieth century allows for a better understanding of the thrust in empirical and theoretical analysis. This situates the research question of this thesis within significance for the subsequent development of research in the field of resource abundance. At the same time, it provides a comprehensive in-depth analysis of the research literature and its chronology, which is particularly important for the development of the theory.

This thesis, therefore, seeks to both engage with the literature and delve into new directions by developing a coherent conceptualisation of the discourses on SWFs and the resource curse theory, while merging the debates on both topics – something which has not been attempted before. The thesis will theoretically and analytically contribute to the creation of a more comprehensive framework for analysing the operation of oil-rich states. After establishing the key components of the success of SWFs in relation to the resource curse theory, the subsequent chapters will test a number of hypotheses to explain the underlying conditions that allow these components to work. The study will then focus on the SWF of Qatar, an oil-rich Middle Eastern state, and analyse the fund's strategy and long-term vision. The time this research was undertaken was a truly unprecedented one for Qatar, in large part due to the exceptional political and economic challenges the state was facing. Land, air, and sea blockades were imposed on Qatar by four neighbouring Arab countries, this predicament allowed for a dynamic study of the Qatar Investment Authority (QIA)—Qatar's SWF. In addition to analysing investment strategies, a scrutinisation of whether such large-scale domestic challenges affect

investment vehicles such as SWFs could also be analysed. The study also includes certain elements of Singapore's SWF—Government of Singapore Investment Corporation (GIC)—which are relevant to the case of Qatar. The SWF of Singapore, a non-oil state, was chosen in order to demonstrate whether the resource base of the fund motivated particular mandates or investment strategies, while better understanding the performance of the funds. In response to the burdens the resource curse theory places on resource-abundant states, this study explores whether institutional structures such as SWFs respond differently if they are founded by an oil-abundant state in relation to a non-oil state. Comparative lessons are drawn from the Government Pension Fund Global of Norway, the largest and most revered SWF. To instil the capabilities of quality institutions in resource-abundant states, this thesis also explores the educational system in Qatar. The resource curse theory argues that oil-rich states lack a highly skilled and educated population (see Gelb, 2011; Humphreys, Sachs, & Stiglitz, 2007), suggesting that resources affect relative investments in human capital. The main explanations of the thesis are located at the institutional level, wherein SWFs form the main unit of analysis along with educational institutions.

The research is qualitative in nature. Many of the initial studies on the resource curse are quantitative studies that rely on data that is highly time-sensitive, attempting to test a hypothesis through cause and effect. The quantitative approach confines the resource curse theory to testable hypothesis analysis. The relationship between resource riches and the dependent variables is tested using econometric methods of analysis without developing the analysis or theory. A qualitative approach, on the other hand, is process-oriented providing substantive analysis of the dynamic nature of a state's interactions while delivering significance to quantitative methods. Despite data transparency enhancement, data relating to the investment strategies and performances of SWFs is heavily guarded and treated as commercially confidential with limited scope. Therefore, disclosed quantitative data in regard to SWFs is not as meaningful as a qualitative approach that focuses less on figures that could be misleading but rather on substance by using qualitative methods such as elite interviews, process-tracing of investments, operation strategies and discourse analysis. Where significant—in the fifth chapter of the thesis, data from the Eikon database of Thomson Reuters has been used, which includes real-time market data, news, and trading details among other financial information. It provides data on asset classes including foreign exchange and equities, which was particularly valuable when analysing the two case studies of Qatar and Singapore. The database was used to compile tables and graphs from raw data on asset classes and types of

investments. The dataset has been surveyed closely since the onset of the research in 2017, and thus meaningful observations could be made from the selling and buying of particular assets that could not have been captured otherwise. Furthermore, to reach original observations on the available data, the study uses process-tracing to identify investment techniques, as investments are undisclosed because of the secretive nature of SWFs. Process-tracing enabled an understanding of the selling and buying of certain portfolio allocations; it allows for a systematic method of understanding mechanisms over the counterfactual-based understanding (Beach, 2016). Tracing causal mechanisms of acquiring assets and analysing the causal mechanism ‘shifts the analytical attention from causes and outcomes to the causal process that links causes and outcomes together’ (Beach, 2016: 15). Questions about why certain investments or assets were acquired could be addressed beyond the counterfactual to encompass the process of whether asset allocations could have been different at critical junctures of the process.

Qualitative methods of analysis were used to analyse the SWFs’ structures, investment and operation strategies and performances. This qualitative approach was then extended to yet another sector, the education sector, which is also rather critical in challenging some of the assumptions of the resource curse theory. Examining contemporary evolutions in Qatar’s educational strategy and institutions broadens the scope of analysis of the crucial role of institutional dynamics in resource-abundant states in determining the ramifications of reliance on lucrative natural resources – hence, challenging the deterministic resource curse assumptions.

This is further complemented by elite interviews. The interviews targeted individuals relevant to each chapter of the thesis. All the interviews were face-to-face. In London, the Chief Executive Officer of the International Forum of Sovereign Wealth Funds was interviewed (name withheld for confidentiality). In Qatar, the Chief Executive Officer of QIA, Mansour Al-Mahmoud, and the Head of Active Investments at QIA, Ahmad Al-Hammadi, were interviewed. For the final chapter of the thesis, four interviews were conducted: Dr Hassan Hakimian, Professor of Economics and Director of the Middle Eastern Studies Department at the College of Humanities and Social Sciences; Moatasim Nuri, Executive Director of Institutional Effectiveness at Hamad Bin Khalifa University; Janhvi Kanoria, Director of Innovation Development at Education Above All; and Dr Asma Alfadala, Director of Research

and Content Development at World Innovation Summit for Education, who was also an associate policy analyst at the RAND-Qatar Policy Institute.

The format of the interviews was semi-structured: ‘a style that is often used in elite interviewing’ (Leech, 2002: 665). Although the interview questions were customised for each individual interview, they did not follow a strictly standardised interview protocol. Instead, the questions were structured around four or five main themes with multiple follow-up questions that sparked valuable discussions and allowed for the narrative to be structured on the know-how of the interviewee. The main aim of having an array of follow-up questions was to encourage the interviewees to discuss wide aspects and not be discouraged by questions they lacked knowledge in. The flexibility of semi-structured interviews allows for a balance between structure and open discourse and is arguably the most effective way of conducting a research interview (Gillham, 2005; 70).

1.2. Research Framework

The discourse on the resource curse constructs a normative institutionalist discourse. The establishment of institutions allows resource-abundant states to mitigate some of the undesirable effects associated with the resource curse, such as minimising the dependency on oil price volatility, while serving as an instrument to smooth government expenditure through the provision of a more secure, diversified source of revenue. This is evident of an analytical problem in the resource curse theory that relies on resource determinism rather than institutional solutions that state governance could use to change the rules of the curse. In contrast to the existing literature in critique of the resource curse, in the following account, this thesis builds on a body of literature that focuses primarily on the resource curse theory to include a critique from an SWF perspective. This offers resource-abundant states with a framework that highlights the importance of resource management, as well as a better understanding of the macroeconomic policies that can be achieved when resource rents are managed.

Whether oil abundance exacerbated existing malfunctioning political and economic institutions and what undermines the benefits of institutions such as SWFs in mitigating resource curse symptoms are analysed from a literature that often focuses on resources as a curse with no

corrective response. This research introduces SWFs as quality institutions while critiquing the resource curse theory; the two have been described in their distinct fields of literature that have often stayed within their respective discourse and not brought together within a discourse. The discourses on SWFs and the resource curse posit the following question: Does sound institutional governance along with substantial improvement in the quality of institutions challenge the conventional wisdom of the resource curse narrative?

A broader conceptual understanding of the validity of the resource curse assumption in relation to non-resource-rich states having sound governance structures and being in effect better off than resource-abundant states is examined through the example of Singapore's SWF. Does the source of the fund drive certain investment decisions, allocation of assets, or risk appetite? Does the governance structure differ depending on the source of the fund? Understanding whether the source of the fund contributes to the functionality and structure of the SWF provides another substantive depth to the research on resource-abundant states and governance. This thesis seeks to explain the limitations of the resource curse in outlining appropriate institutions for managing resource wealth. This aspect of governance has not been sufficiently analysed in the existing discourse on the topic and this contribution will, therefore, add to the existing literature while challenging a theoretical perspective that no longer fits the dynamics of an evolving global network. It will also contribute directly to the wider evolving literature on sovereign wealth development and strategic investments.

The political economy challenges experienced by resource-rich states in the management of resource wealth will be addressed through an institutional lens. The discourse will follow from the conceptual framework of institutional economics and the understanding of the role of institutions in directing economic choice and policy. Most notable in the case of SWFs is the evolution of the institution and the role they undertake. The discourse on institutions has long emphasised that, by nature, institutions change over time, although change is highly case-specific and is determined by the state dynamic that is paramount to the evolution of any state institution. This change has led SWFs to take on much larger roles such as the bailing out of large financial institutions during the global financial crisis. Although SWFs have existed for more than half a century, their roles have progressively undergone drastic changes from their infancy. This institutional innovation will be addressed to analyse the pervasive resource curse, with a specific focus on resource wealth management. The question does not simply rest on whether resource-rich states achieve higher economic growth during resource booms or

whether non-resource-rich states grow faster in comparison. The discourse will be analysed from a prism that focuses on the role and gradual progression of institutions in the economic dynamics of the resource-rich states.

1.3. The Structure of the Thesis

Following the introduction, research methodology, and framework, the remainder of the thesis consists of seven chapters. Chapter Two starts with an extensive critical literature review of the resource curse theory and the establishment of a conceptual framework. It offers a critique of the resource curse theory and highlights its deficiencies. The chapter then discusses the Dutch Disease as a symptom of the resource curse theory to highlight its lessons. The rentier model, which is an essential concept that complements the resource curse theory, highlights the significance of resource rents and its effects on incentive structures along with decision-making processes in resource-rich states. To demonstrate the development of the orthodox form of the 1970s resource curse theory, the quality of institutions and their introduction into the discourse of resource-abundant states is discussed. Concluding the chapter is an account of how the resource curse theory can be approached differently, focusing on institutional development and governance.

Chapter Three introduces SWFs to the conceptualisation of the resource curse model. It sheds light on the contribution of SWFs towards challenging the conventional wisdom of the resource curse narrative. This chapter is divided into four subsections to evaluate the different mechanisms by which SWFs can mitigate or forestall the resource curse hypothesis. The state apparatus and the performance of SWFs are included. The role of SWFs in enhancing transparency and accountability, the issue of absorptive capacity constraints, and the ability of SWFs to absorb wealth, and the diversification prospect of SWFs are also discussed. Concluding with an overall discussion that demonstrates the need to rethink the resource curse theory through SWFs.

Chapters Four and Five constitute the analytical core of the thesis. Chapter Four expands the analyses of the SWF literature and outlines investment strategies, which contribute to the understanding of investment techniques and policies in oil-rich states. It highlights the operational governance structure of SWFs and the different fund types while introducing a

countercyclical rule-based framework which could improve the contribution of SWFs' economic performance. Cyclically adjusted rules are desirable as they separate government expenditure from cyclical volatility. This provides SWFs with a contingent role in the management of resource wealth. The chapter concludes with a discussion of the revered Norwegian model as a blueprint and whether other SWFs could learn from the model, or the model is uniquely Norwegian. It finds that Norway has been successful because it has anchored its SWF in an array of policy measures designed to produce development for the country under prudent financial management and other macroeconomic policies.

Chapter Five presents the case study of Qatar's SWF, analysing the fund's governance and institutional structure, investment strategy and allocation along with its long-term vision and branding strategy. An analysis of the blockade which was a fundamental turning point for Qatar and the investments undertaken by QIA post-2017 were reflective of a push in the right direction. The chapter then investigates whether, ultimately, the policy approach differs between a commodity-based economy and a non-commodity-based economy when it comes to investments in an SWF. The example of Singapore's GIC is examined in order to address the validity of the resource curse assumption in relation to non-resource-abundant states having sound governance structures and being in effect better off than resource-abundant states. Examining whether the source of the fund dictates certain investment decisions and whether the governance structure differs depending on the source of the fund. Analysing a non-resource-abundant SWF alongside a resource-abundant SWF deconstructs the limitations of the resource curse in relation to institutional structures that could manage resource wealth. While Qatar could use its SWF to stabilise macroeconomic challenges in relation to oil price fluctuations, Singapore established its SWF to mitigate the effects of global inflation as trade-dependent economies are very sensitive to upheavals in the global financial economy.

Chapter Six analyses human capital development which, according to the resource curse theory, is another factor that oil-rich states lack. This in large comes from the belief that the reliance on resources can undermine a number of factors in the resource-abundant state, from economic diversification and growth to human capital development. The great strides that Qatar has made in terms of revamping its educational strategy lend it as an interesting case to examine and understand whether it has, in fact, avoided some of the commonly held assumptions about the quality of the educational services in resource-abundant states. In order to investigate this the trajectory of the educational strategy of Qatar is evaluated to understand

the process that has led to the current educational developments. The educational initiatives, reforms, and development in the production of educational institutions are not created in a void but must be interlinked to the institutional needs of the labour market. Whether Qatar's human capital satisfies the needs of the labour market is discussed, which is fundamental as the rentier model classifies the construction of human capital without creating efficient factors of production to cater to the newly developed human capital. Drawing on these chapters, the final chapter highlights the limitations of philosophy and theory, which can be addressed by institutions that can offer a differing approach to the claims of the resource curse theory.

2. The Resource Curse Theory

This chapter analyses the key tenants of the resource curse theory, which forms the main theoretical framework of the thesis. Central to understanding the theory is conceptualising the trajectory of the theory since its naissance. Along with providing an analysis of the principal scholars that contributed to the establishment of the resource curse theory, the analysis will engage with issues related to the resource curse theory in the literature and will further highlight what the theory lacks. The key criticisms of the resource curse theory are a crucial strand of literature that show the significant progress of the resource-rich literature and the downfalls of the resource curse theory in providing policy measures. After providing a conceptual framework of the challenges identified in the literature, the focus will then be on rethinking the curse through the development of institutions and their governance. Institutional quality can play an important role in enabling resource-rich states the ability to move beyond the resource curse theory hypothesis. This will therefore merge theory and practice while addressing the resource curse's economic effects.

To begin with, it is essential to highlight that although natural resources pertain to natural assets that exist in nature such as materials or substances, minerals, water, and fertile land, the natural resources that this thesis will focus on are exhaustive in nature – oil and gas to be specific. In practice, the resource curse theory refers to non-renewable natural resources.¹ To further understand the curse, it is important to highlight that natural resource wealth is *sui generis*. Humphreys, Sachs, and Stiglitz (2007, 17) present two key differences that are worth highlighting: first, natural resources such as oil and gas are extracted. Therefore, they do not necessarily add to processes of production. Oil and gas occur regardless of economic processes, and largely because of the very nature of non-renewable extractives being capital-intensive, employment is not increased as a result. Second, they are non-renewable and thus should be treated 'less like a source of income and more like an asset' (Humphreys et al., 2007: 17).

The theory of the resource curse can be traced back to the 1970s, when a significant body of literature that proposed a relationship between resource endowments, economic underperformance, and socio-political ills emerged. Two divergent perspectives are present in

¹ Manzano & Rigobon (2001) empirically suggest that the resource curse is limited to minerals and oil and does not exist for other minerals (see also Isham, Woolcock, Pritchett & Busby, 2005; Leite & Weidmann 1999)

the discourse. The first perspective can be traced to Adam Smith and David Ricardo, who stressed the benefits of natural resources in the process of economic development. In the 1960s, development theorist Rostow (1960, 15) argued that natural resource endowments would enable developing countries to make the transition to develop or ‘take-off’, just as states such as the United States and Britain had in the past. Similarly, Balassa (1980, 2) argued that natural resources could benefit a state’s ‘industrial development by providing domestic markets and investible funds’. This is the positivist discourse, which lies on one end of the spectrum. This view was dominant in the literature until the early 1980s, when the Dutch Disease framework emerged, which paved the way for the second perspective – the pessimistic discourse (see Corden & Neary, 1982; Van Wijnbergen, 1984). This was essentially when a surge in the analysis on the resource curse theory was witnessed. A sizeable scholarly literature emerged to contribute to the then conventional wisdom.

Scholars in the 1980s focused on issues such as resource management and government policy. Examples include Van Wijnbergen (1984) who questions whether oil revenues are in fact a ‘mixed blessing’ as he evaluates whether high temporary oil windfalls and their negative effects lead to structural economic changes. He notes that this is highly dependent on whether resource wealth is used to accumulate foreign assets. Eastwood and Venables (1982) touch on the macroeconomic implications of resource-rich economies and what they expressed as the inconsistencies conveyed between natural resource and macroeconomic impacts on the economy. They identified that with the addition of a ‘time lag between the resource discovery and the spending of the resource revenue, a deflationary interval will follow the initial exchange rate appreciation’ (Eastwood & Venables, 1982: 297). They recommended an expansionary policy to reap the most benefits from a resource endowment.

The first to analyse the effect of oil windfalls on the economy was Gelb (1988). Although, Gelb did not state the term ‘resource curse’, his analysis established the foundations of the resource curse theory. Gelb (1988, 36) argued that between 1971–83, oil economies ‘experienced a more serious deterioration in the efficiency of domestic capital formation than the nonmineral economies’. He further notes that the long-term negative effect of oil windfall on growth offsets the positive gains from the windfall (Gelb, 1988: 37). It was only in 1993 that Auty established the term ‘resource curse’ and formalised the theory as discussed in the introduction. A year later after his initial study, Auty (1994) noted that it is due to policy prescriptions that the inverse relationship between resource abundance and economic growth is present. He draws

four conclusions on the consequences of resource abundance on policy choice: ‘first, the longer lax macro policies are tolerated; second, the less pressure to achieve rapid industrial maturation; third, the longer rent-seeking groups are tolerated... and fourth, the greater the likelihood of decelerating and more erratic economic growth’ (Auty, 1994: 24). Nevertheless, even in this early research, Auty (1994) recognises exceptions to the resource curse theory and that governments can avoid the curse by using prudent policy measures. The former study puts into perspective how the oil windfalls were squandered especially during the oil price shocks of the 1970s and that was what essentially registered the negative growth rates in the aftermath of the shocks. However, the more fundamental question is not whether resource-rich or non-resource-rich states grow more, but whether public spending and investments in resource-rich economies reflect the riches they have and whether such resource-rich dynamics can be sustained. This will be discussed in the second section of this chapter and will be developed through a case study-based analysis in Chapter Five.

The first scholars to use quantitative methods of analysis to test the theory is the study by Sachs and Warner (1995), who observed a cross-section of approximately 90 countries between the periods of 1971–1989 and produced a regression analysis to demonstrate an inverse relationship between natural resource wealth and gross domestic product (GDP) growth. The study showed a negative relationship in GDP growth for resource-abundant states, compared to non-mineral economies, thereby illustrating a negative relationship between macroeconomic volatility and growth. However, this was by no means conclusive. A number of studies have followed the same lines and postulated a convergence between resource wealth and low economic performance using similar time periods. For instance, Auty (2001) suggested that between 1960–1990, the per capita income of resource-poor states grew two to three times faster than resource-rich states. Similarly, Van der Ploeg (2011) demonstrated that members of the Organization of the Petroleum Exporting Countries (OPEC) experienced a decrease in gross national product (GNP) per capita whereas other states with similar GNP per capita experienced growth.

However, following the study by Sachs and Warner, the research on the resource curse theory has been dynamic in its contribution to the discourse. The majority of literature on the topic attempts to question the study by Sachs and Warner; many studies use it as an example of a problematic analysis. After having lent support to the resource curse, the scholars themselves revisited the research through developed evidence. By way of illustration, Sachs and Warner

(2001, 828) later noted that ‘empirical support for the curse of natural resources is not bulletproof, but it is quite strong’. The limited availability of data raised questions on the validity of the initial research; the culprit was the econometric issue of causality. Indeed, if two variables are correlated, this does not imply that a cause-and-effect relationship exists. This highlights the challenging nature of quantitative methods of analysis. Biases may be present due to a number of factors not being taken into account, including non-renewable resource discovery thresholds and structural issues related to measures of resource abundance. These unaccounted factors translate into problems of endogeneity, a direct measurement error. Ultimately, endogeneity remains a challenge to empirical studies of resource wealth; developed economic methods of analysis have introduced instrumental variables rather than looking for alternative exogenous measures.

Problems associated with omitted variables bias and endogeneity affect many studies, while many others do not shed light on country-specific and long-term effects. For instance, growth is estimated over a long period of time; such studies include those by Sala-i-Martin and Subramanian (2003) who use the period 1970–1998 and by Mehlum, Moene, and Torvik (2006) who focus on the period 1965–1990. Time is extremely sensitive and difficult to assess when it comes to growth. It may take time for growth to manifest in states that are relatively nascent to the resource or are in a transitional developing state. Growth and natural resources may very well be state-specific, and growth may simply need to adjust. To capture growth over time, grouping heterogeneous states simply according to a common resource provides biased conclusions.

Another causal factor at work in the findings of the resource curse is time-sensitivity. Manzano and Rigobon (2001) argue that the resource curse model presented by Sachs and Warner 1995 reflects the effects of the global oil price shocks of the 1970s and 1980s, rather than an inherent tendency for oil-rich states to perform poorly economically. They identify two central statistical issues present in the early study by Sachs and Warner: The first is a problem of correlation and the second is that the value of total GDP used in the study compromised a declining resource sector for over three decades. Manzano and Rigobon (2001, 1) argue that when such factors are addressed, ‘the effect of resource abundance disappears’. Moreover, they confirm that the results presented by Sachs and Warner lack robustness. Sachs and Warner’s estimation method, which is a cross-country ordinary least squares, fails to account for endogeneity, heterogeneity, and omitted variables. Although such biases are prevalent in

growth models, introducing other estimation methods such as instrumental variables can alleviate the problems associated with the OLS estimator. Additionally, other critiques of the resource curse have questioned the consequences of the curse when endogenous structural factors of resource dependence are controlled (Alexeev & Conrad, 2009; Brunnschweiler & Bulte, 2008). A recent study on the relationship between resource wealth and economic growth suggests that the resource curse is a result of empirical misspecification (Badeeb, Lean, & Clark, 2017). Badeeb, Lean, and Clark (2017) suggest that future research should work on addressing the endogeneity of dependent variables while expanding the years of research and the range of empirical specifications.

As the resource curse discourse developed further, broader channels that also affected resource dependence aside from economic growth were highlighted. For instance, Gylfason (2001) introduced savings and human capital investments as other factors affecting economic growth. The mechanisms that link resource abundance to low economic growth can broadly be categorised into two categories that are often overlapping, but characteristically unique: political and economic. Several scholars have examined a variety of economic factors to explain the existence of the resource curse (e.g., Auty, 2001; Manzano & Rigobon, 2001; Mikesell, 1997; Ross, 1999; Sala-i-Martin & Subramanian, 2003; Venables, 2016). The main reasons for the resource curse can be summarised into four categories: the Dutch Disease phenomenon, commodity price volatility, inefficient economic policies, and negligence of education. Other explanations for the resource curse theory are based on political factors. The main political arguments of the resource curse can be traced to rent-seeking behaviour, which includes corruption (Auty, 1994; Leite & Weidmann 1999; Mauro, 1995; Pendergast, Clarke, & Kooten, 2011), greed (Tornell & Lane, 1999), and civil conflict (Caselli & Cunningham, 2009; Collier & Hoeffler, 2004). These negative externalities are viewed as the vessels in which resource abundance hinders development; however, the research has been dynamic and evolving, as scholars have found other factors that lead to the above-asserted factors. For instance, Soysa (2015, 64) criticises the argument that natural resources cause conflict, instead arguing that ‘conflicts are caused by other underlying factors and that the relationship is endogenous’. Conflict such as civil war shapes the dependence of states on natural resources as violent conflict may arise over the control of resources. In this vein, it is understood that the resource curse assumptions are caused by policy failure and unproductive behaviour and thus the problem is less that of an inherent curse associated with resource abundance.

The resource curse theory has therefore come a long way since its inception. Understanding the essence of the resource curse is comprehending that the discourse should not focus on the resources as such but rather on the policy prescriptions within the wider dynamic of resource-abundant states. The first person to coin the term ‘resource curse’, Auty, recognised in their early study that the resource curse can be avoided by prudent policy measures. This is important to address as this means that the burden is not placed on the abundance of resources for the very fact of their inherent existence in the state. The assumption that resource abundance negates economic development is a problematic postulation that needs to be addressed by assessing another dynamic of the theory—one that critiques the theory and analyses how relevant the theory is with the changes in the realm of resource-abundant states and their development and whether resource-abundant states can therefore avoid the curse.

2.0.1. What the Resource Curse Theory Needs

The prevailing wisdom that resource riches are not a blessing but rather a curse, resulting in constrained growth, corruption, and conflict has now been addressed by a new strand of literature that believes that the curse can be mitigated by good governance and quality institutions. This institution-centric explanation of the resource curse has been supported by the developed econometric methods of analysis as discussed above. The idea of good governance and resource management have been promoted by institutions such as the World Bank (2014), the United Nations Development Programme (Clark, 2011; Pineda & Rodriguez, 2010), as well as consultancy-based institutions such as McKinsey (Dobbs et al., 2013), along with organisations such as the Natural Resource Governance Institute (2015). Such diverse actors agree that resource-abundant states can benefit from their resources if resource rents are managed. McKinsey, for instance, argues in a report released in 2013 that if resource-abundant states ‘use their resources sectors as a platform for broader economic development, this could transform their prospects’ (Dobbs et al., 2013: 1).

This positivist strand of discourse stands in stark contrast to the pessimistic discourse of the past century. The discussions on the resource curse theory should thus evolve and cater to the state’s development and evolution; thus, the focus should be on avoiding the pitfalls of the curse rather than believing that the curse is inevitable. Strands within the resource curse theory may actually be beneficial for resource-abundant states, as they could work as guidance

towards potential pitfalls that may be mitigated. What is problematic is the inherent inverse relationship that the resource curse theory proclaims. This statement generalises past trends as well as state trajectories and puts resource-rich states into one basket labelled ‘cursed’. Thus, instead of discussing the negative effects of resource abundance, resource curse symptoms should be used as elements of precaution that resource-rich states should take into consideration to find a way to mitigate their outcomes.

Preventing resource curse symptoms is not only a question of good governance but also involves sophisticated economic strategies for the economy to transition over time in accordance with its competitive advantages. This may be seen as a challenge for states with low institutional quality and limited economic development. State capabilities and policy prescriptions do not always equally foretell outcomes and, therefore resource curse symptoms manifest. For extractive-led growth to be sustained, the resource base must endure past the generation that received the additional revenue streams to a future generation that has a lesser revenue stream, support government spending, and ensure future domestic needs are fulfilled. For this, institutional quality can provide a solid foundation for economic development by targeting specific challenges associated with resource wealth (Alsweilem & Rietveld, 2018: 33).

Scholars also point to the fact that no new paradigm has replaced the traditional resource curse (Hertog, 2012; Stevens, Lahn, & Kooroshy, 2015), which is suggestive of a gap in the existing research. Introducing SWFs into resource curse theory, which remains focused on a narrow state management of resource rents and fails to offer a nuanced analysis of the complex nature of resource abundance, is rather important. This is largely due to the resource curse theory’s reductionist approach, which provides a single broad explanation for the role of resource abundance. Trying to simplify a complex case of resource abundance, generalising historical trends across state funds that are each unique in their performance, is rather problematic.

2.0.2. Critique of the Resource Curse Theory

The causality of the resource curse has been challenged, as some resource-rich states have avoided the curse: examples include Chile, Indonesia, and Botswana.² Such states were able to avoid the curse largely because of macroeconomic policies including exchange rate flexibility, sound fiscal policy, and state budget control, along with inflation-targeting policies. The methodology of the resource curse is problematic as it draws causality from a relatively small sample of resource-abundant states over a short time period. This is problematic econometrically and empirically, as sample size and selection can present biases that can be causal mechanisms. Furthermore, this bleak picture masks a great deal of variation present in resource-rich states. As Frankel (2012, 8) notes, ‘studies written after the commodity price increases of the 1970s found an upward trend, but those written after the 1980s found a downward trend, even when both kinds of studies went back to the early 20th century... when a real price undergoes large ten-year cycles around a trend, estimates of the trend are very sensitive to the precise time period studied’. With no clear policy implication, the resource curse theory presents a rather anomalous hypothesis for growth prospects in resource-rich states.

Polterovich, Popov, and Tonis (2010, 2) empirically investigated the effect of resources on resource-abundant states, concluding that, on average, they have lower budget deficits, lower inflation, higher foreign exchange reserves, higher inflows of foreign direct investment, lower domestic fuel prices, higher investment/GDP ratio, and lower income inequality. Furthermore, they note that resource-rich states do not appear to grow slowly because of the resource windfall itself, justifying this by the states’ ability to pursue suitable policies and benefit from resource rents. Low budget deficits along with low levels of inflation are conducive to long-term levels of growth.

While the explanations of the resource curse have created a conundrum of debates within the literature, some researchers have called into question whether resource abundance is actually a curse. Scholars such as Lederman and Maloney (2007, 32-33) have found that natural resource abundance has a positive effect on growth. They stated that the assertion made by

² See De Gregorio and Labbé, 2011; Humphreys et al., 2007 for Chile; Usui, 1997 for Indonesia and Gupta, Segura-Ubiergo and Flores, 2014 for Botswana

Sachs and Warner lacks robustness to a range of measures of resource abundance and estimation techniques, concluding that *'There is no resource curse'*. Lederman and Maloney assessed how a change in the set of control variables and estimation method would alter or maintain the proxy natural resource exports over GDP and found that resource abundance appeared to be positively correlated to economic growth. They suggest abandoning the concept that resource abundance leads to negative growth and considering channels through which it could lead to positive effects, which could happen by stimulating productivity growth and inducing intra-industry trade from a diverse source of industries (Lederman & Maloney, 2007: 32).

Given that oil prices are volatile, it is problematic to make a connection between oil revenues and low economic performance. Such an assumption needs to consider problems of causality as well as issues of endogeneity. Furthermore, studies by Arezki and Van der Ploeg (2007), Alexeex and Conrad (2009), Van der Ploeg and Poelhekke (2009), and Cavalcanti, Mohaddes, and Raissi (2011) present results contrary to the resource curse hypothesis and question the empirical validity of the curse. Instead, much of the recent literature employs panel data, rather than a cross-sectional analysis which was the focus of many of the earlier studies. Based on such revised methodologies, it is argued that over the past two decades, oil-rich states have developed significantly in terms of financial reforms, diversification, and trade liberalisation (Apergis & Payne, 2014: 2).

In a recent study undertaken by Cavalcanti, Mohaddes, and Raissi (2015, 857) it is argued that *'volatility, rather than abundance per se, drives the "resource curse" paradox'*. Recent studies have brought to light the problematic nature of interpreting resource abundance in Sachs and Warner's early study, wherein the measure of natural resources to GDP or exports was the measure used for resource abundance. This measure is better used as an indicator of resource dependence as an exogenous measure of wealth. Cavalcanti et al. (2011) have further challenged the resource curse paradox by demonstrating that oil-rich states have a positive impact on national income levels and economic growth using econometric methods of analysis. They further note that the focus should not be on whether natural resource endowment affects the economy positively or negatively, but on how growth policies and institutions can enhance resource wealth.

Auty (2003) argues that sound governance is what separates successful resource-abundant states from unsuccessful ones. He further notes that sanctioning states with anti-social governance conditions will lead to an improvement in the quality of governance (Auty, 2003). Auty describes anti-social governance as ‘predatory political states’ and thus by sanctioning such states, economic policies can be attained and sustained. Similarly, the International Monetary Fund (IMF) suggests that resource-abundant states need to adopt sound economic policies along with explicit fiscal rules for the treatment of mineral rents (Iimi, 2007). Furthermore, Auty (2001, 54) notes that the reason some countries are able to avoid the resource curse lies in policy differences, highlighting the importance of three measures: ‘stabilization, trade and price liberalization and capital market reform’. Most importantly, states need to create an enabling environment, where economic policies, including monetary, fiscal, and exchange rate policies, allow for the stabilisation of states’ balance of payments avoiding any likely disequilibria (Auty, 2003: 2).

There is broad agreement among scholars that in the absence of institutionalised political accountability, the resource curse tends to undermine long-term economic efficiency and increase resource misallocation in the economy (Mehrara, 2009; Robinson, Torvik, & Verdier, 2006; Ross, 1999). Contrarily, others believe it can be counteracted through technological progress and sophistication in the resource sector, along with appropriate investments that are based on country-specific knowledge (Wright & Czelusta, 2004). They note that the problem with the windfall is one of distribution rather than one of resources.

After having provided a conceptual framework of the development and evolution of the resource curse literature, the following sections will explain the importance of the Dutch Disease as a cause of the resource curse theory and what research has suggested in response. The rentier model, its limitations, and misconceptions will follow the analysis along with the introduction of an institutional-centric explanation as a response to the resource curse theory.

2.1. The Dutch Disease – A Symptom of the Curse

A critical assumption in the resource curse theory is that a windfall in the extractives sector will render other sectors in the economy uncompetitive. Although the resource curse may manifest itself differently depending on the state apparatus, the literature still agrees on a number of political and economic issues that are inherently significant: this includes the appreciation of the real exchange rate, which impacts the competitiveness of other exporting sectors, known as the ‘Dutch Disease’ (Corden 1984; Corden & Neary 1982; Gelb 1988; Krugman 1987; Van Wijnbergen, 1984).

In the 1960s, the Netherlands discovered a non-renewable resource – natural gas. This caused economic distress to their manufacturing sector output, due to the appreciation of the Dutch currency as a result of the increase in demand for gas exports. Therefore, the term Dutch Disease has been used in research since 1977 to refer to a real-world example of how a natural resource boom can ultimately lead to a loss of international competitiveness due to an overvaluation of the real exchange rate for the non-tradable sectors (Van Wijnbergen, 1984: 41). The rise in the relative price of non-tradable goods renders the goods too costly and thus expenditure shifts to tradable goods. Iimi (2007) considers the Dutch Disease to be the most prominent economic factor in the resource curse. Corden and Neary (1982) note that this will cause a resource reallocation resulting in a negative displacement and increased recessionary exposure for the non-tradable sector. This is also known as the spending effect. Another effect is the movement effect, which happens as a result of factors of production moving to extractive-led industries. The last of the effects included in the Dutch Disease is the spill-over loss effect, which occurs as resource extraction may imply slow technological progress. The Dutch Disease phenomenon summarises macroeconomic consequences as a result of a resource boom. Thus, when such macroeconomic failures are addressed, the Dutch Disease can be avoided, especially as it is a result of market failures.

An incident very similar to the case of the Netherlands happened in the sixteenth century in Spain. What Spain was able to do with its army size was only possible because of its extraordinary wealth at the time; while it was able to increase its army substantially during this period, ‘inflation and currency appreciation slowly killed industry and agriculture’ (Useem, 2003). Furthermore, even historians have provided their insight into the level of disturbance caused by lucrative conquests (Landes, 1998).

Economic policy analysis has been extensive on the Dutch Disease model (Corden, 1984; Gelb, 1988; Van Wijnbergen, 1984). This is quite natural as the logic of the Dutch Disease makes it compelling to provide economic solutions. However, scholars such as Salehi-Isfahani (2012, 149-50) believe that while the model provided industrial policy to oil-rich states in the past, ‘as the level and quality of human capital in these countries have increasingly come to determine comparative advantage, and thus who wins and who loses in global competition, the division of the economy into sectors with more or less tradability has lost its relevance’. Therefore, as the quality of different state components develops, it is no longer valid to assume that tradable sectors are good while non-tradable ones are not.

Krugman (1987) raises the question of why the Dutch Disease is even considered a problem. The international trade model states the need to specialise in one sector and if a country’s comparative advantage is in oil, then that is their specialism. He further notes that the ‘alarmist concerns’ about the Dutch Disease can be given a ‘plausible grounding by a model in which dynamic economies of scale play a crucial role’ (Krugman, 1987: 53). Davis (1995) adds to this criticism in that developed countries mix up the negative effects of development with the Dutch Disease: ‘The fault lies with the unfortunate connotations implied by the word “disease”’ (Davis 1995: 1765). He notes that the terminology is being used incorrectly, as the negative connotations towards the policy with which the resource curse thesis burdens developing resource-rich states has evidently led developing states to mistakenly categorise negative development effects as the Dutch Disease. Davis (1995, 1777) finds that resource-rich economies have performed well because of resource production. To further illustrate speculation that could exist in regard to the notion of comparative advantage, one can consider the following example: Assume State X gained from its resource wealth before State Y; this then allowed State X to develop a non-tradable sector of the economy, while State Y failed to do so. Assessing resource wealth against exports for State X would show a decrease in resource wealth as another sector of the economy has also contributed to export wealth, while State Y’s resource wealth from exports will remain unchanged. It would be wrong to presume that State Y has performed poorly in terms of growth in comparison to State X as this would mean that potential endogeneity has not been considered. The point is that states develop their economy and, by doing so, the share of wealth is distributed; thus, the dynamic role that other sectors could play in the economy should not be dismissed.

Although the Dutch Disease has been critical of the development of resource-abundant states, Indonesia, an oil-rich state has been an exception making it 'difficult to detect symptoms that the Dutch disease theory predicts' (Usui, 1997: 152). Usui (1997, 152) argues that it is because of policy adjustments, including 'fiscal, foreign borrowing and exchange rate policies' that Indonesia avoided the expansionary effects of resource wealth experienced by other resource-abundant states. First, Indonesia succeeded in sterilising oil rents by cleverly accumulating a budget surplus to avoid the expansionary effects of resource wealth. Second, the government budget expenditure was balanced and contributed largely to the tradable sector. Third, Indonesia undertook a conservative foreign borrowing strategy. Finally, during the oil boom, Indonesia devalued its currency, which was successfully implemented as appropriate policies such as budget surplus accumulation were set in place. A significant factor responsible for the success of Indonesia is a balanced budget expenditure achieved by the investment of windfall revenues into the tradable sector. Therefore, from the example of Indonesia, it can be implied that by accumulating a budget surplus, the government could potentially avoid the real appreciation of the currency. However, revenue sterilisation is a long-term process that requires adequate policy choices that can maintain the need to accumulate the resource windfall and dismiss the urge to spend the money on the non-tradable sector, which would consequently lead to the real appreciation of the currency.

The composition of oil revenue expenditures ultimately determines the extent of the Dutch Disease (Usui, 1997:154). Thus, the Dutch Disease can be viewed as a problem related to the mismanagement of wealth, stemming from a resource windfall. Quality institutions that target issues such as domestic absorptive capacity, resource wealth sterilisation and avoiding the expansionary effects of resource wealth can effectively manage allocation.

2.2. The Rentier Model

Rentier state theory is an essential concept that complements the resource curse theory, as it focuses on how large resource rents affect incentive structures along with decision-making processes in resource-rich states. Rentierism is a structural feature endemic to oil-rich states; however, its consequences are paradoxical. Rentier state theory seeks to explain how high resource revenues affect governance and state-society relations.

Mahdavy (1970) was the first scholar to introduce the fundamentals of rentierism as a concept by writing about pre-revolutionary Iran in the 1960s. It was arguably the first piece of research that focused our attention on the issues of the rentier state and ultimately gave birth to the vast literature that then followed. Rentier state theory deals with how the government's reliance on external rents shapes its economic policies and the quality of its governance. Mahdavy (1970) argues that when states rely on oil, government spending dominates the economy; this occurs without the government having to resort to taxation, which leads to a breakdown in accountability. As a result, in his argument, oil leads to the negligence of development because the leaders follow their best interests.

However, although this may have been true at the time, this does not hold true in the present day, as the rentier model has not provided answers to explain the substantive changes in the economic and political environment of resource-rich states in the past decade. Such changes include globalisation, innovation in technology, freer trade, increase in investments, social changes, and development (Gray, 2011). The shortcomings of the rentier state theory and the oversimplification are modified by Gray (2011), who introduces a new phase of rentier state theory, which he calls 'late rentierism'. He argues that this should be applied to rich oil states of the Gulf. 'Late rentierism' accepts the basic assumptions of rentier state theory and incorporates that rentier states internalise non-rentier traits into their domestic structure—this is a sophisticated approach in the light of state development and globalisation. Non-rentier traits include investing in the domestic economy, developing economic policies to facilitate business, and creating taxation-derived projects. In fact, 'SWFs are key elements of late rentierism and enable the state to look beyond the immediacy of rental wealth, to longer-term economic and political needs' (Gray, 2011: 35).

Mahdavy (1970, 437) introduced two vital implications: that rentier states would suffer from 'economic and technological backwardness' and 'socio-political stagnation'. It is the former economic implication that complements the resource curse theory alongside the second implication that deals with a political condition. Ross (2001) highlights the political effects of oil rents by examining the impact of an oil windfall on democracy. He divides the effects into three categories: rentier, repression, and modernisation effects. The rentier effect includes an examination of greater accountability through the use of fiscal measures such as low taxes and high government spending, the repression effect allows for greater security to ward off pressures of democratisation, and the modernisation effect examines incentives that render the population attached to a collection of social and cultural norms, which holds against democracy. Although Ross (2001, 357) finds that the link between resource wealth and authoritarianism is elusive, a rentier effect is present; however, repression effect and modernisation effect show no evidence of affiliation.

The diversification objective is set by rentier dynamics. Rentier dynamics constitute short-term windfalls from resource endowments, which weaken the economy's long-run potential as a substantial amount of the rent is spent, while large resource rents affect decision-making processes and incentive structures (Ross, 2001). Further, Basedau and Lay (2009, 774) argue that resource-abundant states 'tend to have better state institutions than their oil-poor counterparts'. This is justified theoretically by an adjustment to state institutions and is in opposition to the conventional assumptions of the 'weak state'. Resource wealth may translate into a positive net effect on the quality of institutions in comparison to other oil-rich countries with lower resource wealth. This maintains political stability due to large-scale distribution of resource wealth on security and external protection. In contradiction to the claims of the rentier state theory, institutions in resource-rich countries are not influenced by 'patronage and clientelism' (Basedau & Lay, 2009: 757). The rentier state theory identifies economic stagnation, corruption, and authoritarian regimes to be inherent features in the political economy of resource-rich states, however, contrary to the resource curse theory it believes that governments use resource wealth to buy patronage and, thereby contribute to political stability. However, the issue is not simply a matter of state regime, without effective checks and balances even democracies fall under competition for natural resource rents (Gelb, 2011).

Rentier state literature is divided into two different strands. Mahdavy begins the contribution to research by focusing on economic models that produce outcomes and structural mechanisms.

The second is focused on the rentier state and the political economy dynamics of rentierism. The first strand of literature characterises the Dutch Disease model, whose structural features fit into rentier economies. Such structural features include exchange rate overvaluation, dependency on an expanding services sector, and crowding out manufacturing production altering the composition of the labour market (Corden 1984; Corden & Neary, 1982). However, Mahdavy's insights extend past the issues discussed in the Dutch Disease discourse and cover income distribution and the impact of oil price volatility on growth, which has only been discussed in the discourse on oil-rich states lately (see Van der Ploeg & Poelhekke, 2009).

Within the assumptions of the resource curse theory, it is believed that resource abundance leads to conflict. 'Natural resources provide both motive and opportunity for conflict and create indirect institutional and economic causes of instability' (Basedau & Lay, 2009: 757). Meanwhile, Basedau and Lay (2009) recognise that rentier state theory argues that resource-rich states use their rents to secure political partnerships for peace with other states while undertaking income redistribution policies nationally resulting in population repression. However, if that were the case, this would consequently lead rentier states to experience political stability along with internal peace.

Rentierism-associated consequences exert negative pressure against developmental objectives. While rentierism has enabled the state to funnel oil and gas revenues into society and secure a measure of political acquiescence, it has also made the state dependent on maintaining its patronage position for fear of adverse consequences. Oil-led growth demonstrates captive vulnerabilities to exogenous trends while directly reflecting the turbulent cycle of the international oil market (UNDP, 2009a). Kamrava (2012a, 6), for instance, notes that 'rentier arrangements notwithstanding, and the wealthier states of the region have used SWFs as investment mechanisms'. Rentier states share fundamental similarities in their domestic characteristics. The essence of rentierism is that states earn high rents from economic activities that do not require the same level of productivity. However, what differs from one state to another is the level of the state's reliance on rentier arrangements and how entrenched they are in the system of state affairs (Kamrava, 2012b: 43).

Bayulgen (2005, 29) argues that politics does not feature in rentier-state research and that the political structure facilitates resource-rich states' development. He analyses the experiences of Azerbaijan and Russia in the 1990s to demonstrate that oil-rich states with authoritarian

regimes oil sector thrives better in terms of attracting foreign direct investment than oil-rich states with democratic regimes, which could partially explain the durability of such regimes. Tierney (2008) criticises politicians and argues that they are part of the problem: poor policymaking has discriminated against the non-tradable sector. A distinct feature present in a rentier state is a lack of long-term perspective, which is most evident in decision-making (Beblawi, 1987). This is why SWFs are introduced into the discourse as they can act as potential institutions that could alter the planning and allocation of natural resource proceeds in ways that have been less considered before, which is what this thesis intends to explore. Scholars have called for greater specificity on the political economy of the resource curse for instance; Torvik (2009, 242) states, '[w]e still have a quite limited knowledge along which dimensions the resource-abundant winners and losers differ, and about what the mechanisms behind these differences are'. It is for such questionings that the search for answers pertaining to the management of resource wealth is needed.

2.3. The Quality of Institutions

The discourse on the resource curse theory has moved far beyond its orthodox form of the 1970s. The majority of researchers now acknowledge that institutional quality can play an important role in enabling resource-abundant states the ability to counteract the resource curse. Despite this, there still seems to be a widespread generalisation that resource-abundant states are inefficient or, to put differently, are not investing their resource revenues wisely, with investment techniques being viewed as irrational.

Scholars that have lent support to the resource curse argument focus on the failure of governments in constructing favourable policies for development, efficiency, and institutional quality (Brunnschweiler & Bulte 2008; Costa & Santos, 2013; Mehlum, Moene, & Torvik, 2006; Sachs & Warner, 1997; Sala-i-Martin & Subramanian, 2003). Other scholars that have analysed the role of institutions include Sala-i-Martin and Subramanian (2003, 570) who state, 'some natural resources, oil and minerals in particular, exert a negative and non-linear impact on growth via their deleterious impact on institutional quality' and thus, they believe that controlling institutional quality in resource-abundant states can lead to positive growth. The institutional architecture of the state is seen as a crucial determinant of economic growth when it comes to natural resource abundance. Mehlum et al. (2006) and Robinson, Torvik, and

Verdier (2006) argue that resource-rich states need not fall victim to low economic growth if they have ‘good institutions’.

Scholars now agree that controlling for quality institutions can mitigate resource curse symptoms. Frankel (2010) notes that procyclical savings by governments in SWFs can improve resource wealth management. He has narrowed down the type of institution by identifying specifics, to increase economic growth, whilst analysing previous efforts to reverse resource curse symptoms: ‘indexation of oil contracts, hedging of export proceeds, denomination of debt in terms of oil, Chile-style fiscal rules, a monetary target that emphasizes product prices, transparent commodity funds, and lump-sum distribution’ (Frankel, 2010: 1). The adaptable nature of SWFs makes them an institutional choice that can be tailored to the needs of the resource-abundant state. Schwartz (2012, 517) highlights that SWFs act as a buffer for states from economic challenges associated with large-scale resource exports. As Hertog (2012, 222) states, ‘oil income dramatically enlarges the menu of institutional choices’. Resource abundance can allow states to use oil windfalls for domestic purposes, while also reconfiguring their position in the global economy—a key variable behind the creation of SWFs, as highlighted by Diwan (2009, 345-46).

The impact of oil on institutional quality has been tackled by a number of scholars (Chaudhry, 1997; Isham et al., 2005), where a negative correlation between oil wealth and the quality of governance has been drawn. However, such an inference is problematic as it draws from a counterfactual—something that many orthodox arguments on the resource curse suffer from—where an inference is made on the impact of oil on a variable. An example is the statistical model used by Isham et al. (2005) where they analyse state export structures in relation to institutional indicators of good governance. In the study, the GDP per capita is controlled for; however, the GDP per capita in rentier states is influenced positively by resource rents and thus tends to be overinflated. This reflects an economic situation rather different from a state that does not rely on a resource windfall but has a relatively similar result. Chaudhry (1997) analyses how Saudi Arabia and Yemen experienced differing institutional reactions to the boom of 1970 and the bust of 1980; the implications of the boom on Saudi Arabia led to the construction of distributive institutions and the negligence of a tax bureaucracy, and the bust notably led to the strengthening of financial institutions and government business relations. Yemen experienced a flow of remittance income, which led to the rise of informal banking institutions replacing government-led institutions. He further notes that both states responded

by reissuing taxes, cutting government spending, and strengthening financial institutions, responses that could not have been predicted by theoretical approaches, thus arguing that neo-institutional economists have not acknowledged the origins and variances that could exist across institutions.

Scholars that test the level of resource abundance and its effects on various resource curse hypotheses challenge proponents of the resource curse argument. Hertog (2012, 227-8) analyses the 'technocratic' qualities of state institutions to find that wealthier resource-abundant states perform better than those that are not as wealthy in terms of resource abundance. This inference suggests, 'oil income, at least above a certain threshold, is good for institutions' (Hertog, 2012: 228). He argues that resource-rich states do not face prudent decision-making on government spending and, as a result, fiscal priorities are dampened which leads to institutional experimentation. This could, of course, have a heterogeneous impact on institutions, but because of the ability of the state to experiment due to its tremendous wealth, institutions are protected from unproductive structures; however, this is not the case when resource wealth is limited.

Although resource wealth is volatile, it has enabled resource-abundant states to develop their infrastructure and initiate economic reforms, largely due to inflows of foreign exchange (Apergis & Payne, 2014: 2). A recent study undertaken by the World Bank scrutinises the resource curse hypothesis, suggesting that resource wealth can be a blessing if it is transformed into a sustainable form of wealth (McMahon & Moreira, 2014). The sustainability of resource wealth can only be achieved through sound governance and institutions that deal with resource wealth. Collier and Goderis (2008) found that high prices of natural resources negatively impact growth only when resource-abundant states lack good governance, asserting that the curse is avoided by states with good institutions.

The resource curse theory considers institutions as a general form and does not make a distinction between the wide range of institutions. This suggests that unless the resource curse theory is modified significantly, diversified investments undertaken by SWFs could allow oil-rich states to circumvent resource curse symptoms. Investments by SWFs allows for diversification beyond state boundaries and alternative streams of revenue. It is telling that some oil-rich states, such as Indonesia, Botswana, and Norway, have avoided the resource

course through sound governance in an attempt to diversify and tackle the uncertainty of commodity prices.

Apergis and Payne (2014) examine the impact of oil abundance on economic growth on a number of Middle East and North Africa (MENA) states for the period 1990–2013. The results show that between 1990 and 2003, the impact of oil on growth was negative; however, after 2003, the impact of oil abundance on economic growth was positive. This was attributed to improvements in the quality of institutions, as well as economic reforms that were undertaken in the MENA countries examined. The variables that constituted institutional quality in the study included property rights, trade openness, business environment, and judicial processes. What is particularly important to take from the findings is that the improvement in institutional quality over time diminishes the adverse effect of the resource curse. Thus, it can be understood that the impact of oil abundance on growth is highly dependent on the time period and whether or not the quality of institutional reforms has been effective. This is not to dismiss the resource curse theory, but rather to show that once certain factors such as institutional quality are maintained, this could significantly alter the causal relation proposed by the resource curse hypothesis.

Institutional quality happens to reflect the economic performance of the state as it creates an institutional environment that delivers higher growth by functioning at an elevated level of productivity. Gelb (2011, 67) notes that institutional quality in resource-rich states provides a larger basket of diversification options than institutions with weaker formal functioning. In this case, the problem may not be natural resources but the lack of institutional quality that functions as a complementary factor. An important factor of diversification is macroeconomic policy over the resource cycle, to stabilise the economy and its resource sector, which needs the right institutional framework to function.

Clark, Dixon, and Monk (2013) assert that SWFs can dampen the negative impacts associated with resource wealth. Factors that determine the economic growth of resource-abundant states depend on the political economy of resource wealth management (Gelb, Eifert, & Tallroth, 2002). This is largely dependent on the institutional foundations present in the state that can effectively manage resource wealth. Scholars such as Mehlum et al. (2006) note that the difference between resource-abundant states' performance is in the quality of their institutions. States with strong institutional foundations have been able to clear away some of the

misconceptions associated with resource wealth—Norway is an example. Only resource-abundant states with inferior institutions experience negative economic growth, which is why the quality of institutions is critical in determining the presence of the curse. Therefore, policymakers have focused on modifying existing financial policies to fit the needs of resource-abundant states, as well as improving institutions (Kahn, 2010).

Oil-abundant states should focus on developing mechanisms in which the allocation of oil wealth can prove useful to their respective economies. Askari and Jaber (1999) note that resource-abundant economies should focus on creating an economic basis that will allow their population to maintain their standards of living once resources are exhausted, consistent with the diminishing nature of resources. Along the same lines, Segal (2012) asserts that expenditures should be smoothed out in times of temporary booms and troughs to avoid volatility, by developing mechanisms through which the allocation of resource revenues can enhance economic welfare and growth-based policies.

Robinson, Torvik, and Verdier (2006, 447) note that the impact of resource windfalls on states largely depends on institutional quality, since it is institutions that can reap and perverse incentive channels in the boom-bust cycle. Resource booms create inefficiencies in the economy, as they lead decision-makers to inefficient distribution of resource wealth; however, whether such inefficiencies lead to the resource curse is dependent on the quality of institutions. They highlight that states with institutions that limit the political ability of politicians tend to experience positive growth as a result of resource booms; however, the absence of such institutions raises political incentives, which could lead to low growth.

Scholars have used variables to account for institutional quality and explain the variation in resource-rich states that have increased their development performance. They have come to an agreement that states with poor quality institutions that have limited savings and investments suffer more from the resource curse (Atkinson & Hamilton, 2003; Frankel, 2010). Their collected evidence shows ‘that resource dependent countries with relatively good quality institutions appear to be better placed to transform the liquidation of resource wealth into additional genuine saving’ (Atkinson & Hamilton, 2003: 1804). The quality of the institution is defined in terms of the extent of ‘rule of law, bureaucratic quality, government corruption, investment expropriation risk and contract repudiation risk’ (2003, 1802). The quality of institutions reflects the efficiency of investments and economic rents invested for the future.

Atkinson and Hamilton (2003) describe resource mismanagement as the use of resource rents to finance government expenditure, spending on public wages, and depleting wealth. Governments that follow such a route suffer from the resource curse; however, governments that have used rents to invest have avoided the resource curse.

Mehlum et al. (2006) test the extent of institutional effect on the resource curse. They claim that quality differentials across state institutions impact national income; states with 'grabber friendly' institutions suffer, whilst those with 'producer friendly' institutions increase their economic growth (Mehlum et al., 2006: 1). Their study introduced a dimension that considered the complex nature of economic cycles and thus the impact of resource abundance on economic growth was conditional on the quality of institutions. In fact, Mehlum et al. (2006) used the same dataset and econometric method of analysis as the original study undertaken by Sachs and Warner in 1995 and 1997 and developed the approach by including an interaction term between measures of institutional quality and resource abundance, thereby testing their hypothesis that resource wealth and economic growth must be looked at in the context of institutional quality. The study by Mehlum et al. (2006) lends support to the institutional explanation of the resource curse and serves two purposes that develop the discourse: first, it applied the institutional perspective to the resource curse discourse. Second, it focused on solving the macroeconomic aspect of institutional dynamics by disaggregating the institutional analysis into 'grabber friendly' and 'producer friendly' institutions.

In addition, Beland and Tiagi (2009) argue that the classification of resources when conducting a regression specification impacts the economic growth results. The index used to measure the quality of institutions is the Fraser Institute's Economic Freedom of the World index; they note that the index allows them to capture a more accurate measure of the role of institutions on economic growth as the index captures a large number of economic institutional indicators, such as legal structure, property rights, and regulation of credit. Further, they suggest that the level of economic freedom is an imperative factor for economic growth, which is within resource-rich states' capacity to improve and change. Another measure of institutional quality they used, which was essentially used in the former study by Mehlum et al. is based on data from the Political Risk Services where five sub-indexes were used as indicators of institutional quality: bureaucratic quality index, rule of law index, governmental corruption index, government reputation of contracts index, and risk of expropriation index. Further, Beland and Tiagi (2009, 1) agree that quality institutions play a 'decisive role in determining if natural

resources are channelled into positive economic growth', reversing the resource curse. Evidence from the study suggests that improving the rule of law, which would in effect protect property rights and encourage investment; removing trade barriers; and simplifying business regulations would improve economic freedom levels, which would in effect lead to economic growth (Beland & Tiagi, 2009: 59-60). The quality of institutions and natural resource rents are in fact considered interaction variables within resource curse theory. The institution-centric perspective and the importance of quality institutions that emerged in the literature served the purpose of questioning the origins and structure of institutional processes. Live examples of success are demonstrated by Norway, Canada, and Indonesia.

One can argue that absolute levels of oil income per capita in resource-abundant states have allowed for institutional experimentation. In that, the risk in the institutional dynamic is considerably small, as the capacity of wealth allows for new outlets to be tapped. If this is taken as a given today, it must be highlighted that this was not the case during the first oil boom of the 1970s and 1980s. It was only post-1970s that the real spending in oil-rich nations actually increased. Resource-abundant states were not always wealthy. They have struggled through years of low oil prices; the earliest example is in the 1980s. The Gulf States which are seen as the richest states in the world today experienced devastating economic effects during the Gulf War. Some Gulf States have faced decades of debt considering the low prices of oil in the 1980s and economic commitments of the Gulf War in the 1990s and have only been able to recover the decades of debt in the early 2000s (Diwan, 2009: 356).

The perception that resource wealth is bad for states that exploit resource rents is well established in the resource curse theory. This stems mainly from a generalisation that considers if Factor X is misused, that would ultimately lead to Factor Y. This formulation is rather problematic—first, it risks multicollinearity which occurs when more than one independent variable is linearly correlated. Second, it does not consider multiple complex factors that may be causing a given phenomenon. If truly X leads to Y, the possible variables in between are worth investigating. The long-believed idea that too much of a good thing is actually not good is illustrative in the attitude of Jean Bodin in the sixteenth century (cited in Sachs & Warner, 1997: 4): 'Men of a fat and fertile soil are most commonly effeminate and cowards; whereas contrariwise a barren country make men ... careful, vigilant and industrious'. Vigilance is promoted by the idea of starkness largely because when an individual is truly in need they think outside the box, which in effect promotes creativity and innovation. Assessing resource riches

in the twenty-first century, while taking into consideration Bodin's quote, would mean that resource-rich states are victims of the resource curse, which is rather limiting. Since then, we have developed new innovative technologies that deal with inefficiencies. Institutions have also developed their roles and obligations and thus institutional quality can to a large extent determine whether or not strategy, vigilance, and diligence are carried forward.

The quality of institutions has been the robust conducive variable that allows resource-rich states to harness their commodity wealth in the long run by addressing political and economic challenges associated with windfall revenues. The understanding of the resource curse theory has evolved in comparison to the uncritical acceptance of the resource curse presented by Sachs and Warner. The weak contested relationship between economic performance and resource wealth has encouraged a more dynamic approach to the discourse that has important policy implications and identifies features common to states that have successfully developed by harnessing resource wealth. The early studies on the resource curse neglect the institution-centric perspective of resource wealth management, which shows how development and innovation in institutional formation have made the contribution of institutions central to wealth management. Newer research has shifted the lens of analysis from the general discourse focused on natural resources and economic performance to the specific.

Negative expectations from resource-abundant states with respect to both economic inefficiency and the poor quality of rentier institutions is inefficient. Thus, it is important to rethink the generalisation put forth regarding resource-abundant states and their association with economic underperformance. Challenges faced by resource-abundant states can be seen as issues relating to resource windfall management. In this context, the role of institutions such as SWFs could be particularly decisive in mitigating the effect of the resource curse.

2.4. Rethinking the Curse

The literature on the resource curse theory, although substantial, does not effectively address the social forces that contribute to a state's development in resource-rich states. The assumption is that because of policymakers' centralised policymaking in resource-abundant states, there are no social pressures in the decision-making process. This is largely due to the fact that the population is not taxed, which is often the case in many resource-abundant states. However, although policymakers may not face social pressures due to the nature of taxation policies in resource-abundant states, they do face social pressures in regard to spending decisions (Okruhlik, 1999). When assessing such social factors, it is only natural that we assess past trajectories of social dynamics. As Okruhlik (1999, 309) illustrates in regard to resource-abundant states, 'life did not begin, as many imply, in 1973 with the quadrupling of oil prices. Rather, oil enters into an ongoing process of development and into a constellation of identities'. Therefore, to analyse development performance in resource-abundant states, one needs to comprehend the social structures and characteristics in these states and move beyond the limitations of the resource curse.

Another strand of literature focuses on the political and social changes that will essentially counteract the resource curse. This strand of literature believes that changes in economic policy are secondary vis-à-vis the political and social transformation that the state needs to experience first. Mitra (1994) argues that resource-abundant states need to change the mindset of the political elites, only then should they undertake policies to mitigate the resource curse. Policymakers should thus treat resource rents as temporary streams of revenue. However, the former argument is unfeasible; for every state to work on behavioural changes rather than economic policy, would create a multitude of social issues, which would only add to the problem. Rosser (2006) agrees that such research does not consider issues of political feasibility. Additionally, it is well established now that resource windfalls are temporary in nature, and it is for that very reason that SWFs are established in many resource-rich states.

It almost appears as if the theoretical and empirical literature has taken the negative impact of resource revenue on economic growth for granted. Despite the inconclusive nature of the evidence proposed by the literature on the resource curse theory, after 2010, the literature seemed to take a different direction: the research was not only concerned with understanding the exact mechanisms through which institutional actions and policies could prevent the curse,

but a trend of challenging the entire curse emerged. James (2015) contributes to this trend through a ‘statistical mirage’—the debate here is that resource-rich states grow slowly during certain periods (1980–1990), but relatively quickly during others (1970–1980), largely because of variation in resource price. In essence, the statistical findings show that resource dependence and the growth of non-tradable production sectors are positive for all growth periods; James (2015, 62) notes that industry types employed by the state can explain this non-negative relationship. Such results are explained by heterogeneity, where a large amount of variation is attributed to the volatile nature of the resource. Thus, this understanding can contribute to the discourse and provide another approach to the resource curse theory, without invalidating the theory. Resource curse symptoms could impact certain resource-rich states during certain periods of time. However, the larger question is how they can mitigate or escape the curse, without presuming that the curse is inherent, which is what is problematic in the theory. This is where the role of institutions such as SWF offers a nuanced perspective as a state institution established by resource windfalls.

In the following chapter, an assessment of whether the causes of the resource curse theory can be strategically handled by an SWF will be discussed. By introducing SWFs into the discourses surrounding the resource curse theory and challenging the resource curse assumptions that assume oil price volatility, inefficient economic policies, rent-seeking activities, and weak institutions, an original understanding of mitigating the resource curse symptoms can be achieved.

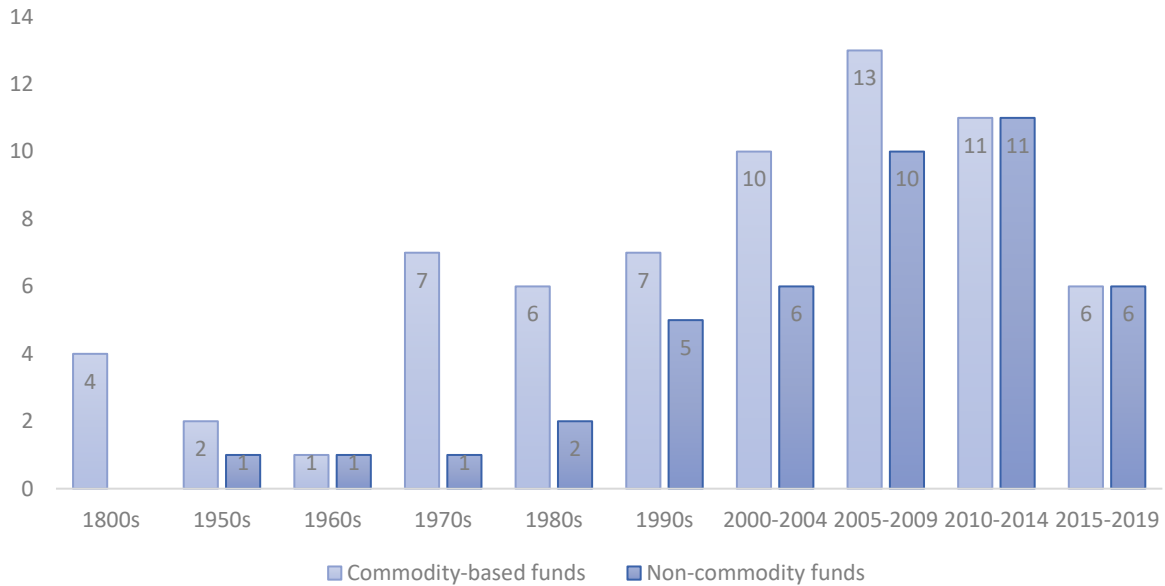
3. Sovereign Wealth Funds – Cursed?

In the last decade, the discussion on SWFs has extended well beyond the disciplines of economics and politics and appealed to many policymakers and research analysts. The widespread attention gained by SWFs leads us to question their significance. By introducing such an institution to the discourse on the resource curse theory, this dissertation recognises the institutional modifications and innovations that could occur as a result of state development.

One notion that clearly emerges in the literature is that there is no single definition that seems to capture the capacity of SWFs. In the conventional analysis, SWFs are defined as state-owned institutions that invest from resource revenue savings. This definition is very broad and fails to capture the most important characteristics of SWFs. They are long-term investors that transfuse the required capital to financial institutions with mutual benefits to the SWF's home country as well as the country that hosts SWF investments. Although there is no universally accepted definition of SWFs, they can be classified as part of sovereign savings, which include central bank reserves, commodity savings or stabilisation funds, pension reserves or social security funds, and government holding management companies. They are established from windfall revenues, balance of payments, or fiscal surpluses (IWG, 2008). The SWF Institute (2018a) states that an SWF 'is a state-owned investment fund or entity that is commonly established from balance of payments surpluses, official foreign currency operations, the proceeds of privatizations, governmental transfer payments, fiscal surpluses, and/or receipts resulting from resource exports... [they exclude] foreign currency reserve assets held by monetary authorities... [and] government pension funds'. Rozanov (2005), the first to coin the term SWF, simply defines it as the accumulation of excess revenue through a planned budget and spending restraint. The term SWF can be defined by its components: 'sovereign' entails that the institution is autonomous and self-governing; 'wealth' must be generated by a windfall—in this case, the wealth generated by non-renewable commodities—which in effect leads to the sustainable accumulation of foreign exchange reserves; and the key term 'fund' implies an investment vehicle that invests in the present to create long-term income with no specific long-term liability, unlike, for instance, state pension funds. The absence of offsetting liability gives SWFs a unique form of power in the economy, in comparison to other financial institutions such as hedge funds and pension funds. These funds all have unique characteristics and individual strategies; however, the common aims that can be distinguished include economic

diversification, inter-generational wealth transfer, protection against oil price volatility, and knowledge transfer expertise from the host state.

Figure 3.1: Number of Established Sovereign Wealth Funds



Source: SWFI data (2019a)

Sovereign funds are no new phenomenon, but their total size has increased significantly over the past two decades. Nearly two-thirds of existing SWFs were established between 2000–2015 (SWFI, 2018a). The turn of the millennium marked a proliferation in the establishment of SWFs, as shown in Figure 3.1. The increasing appeal has been spreading to non-resource-rich states that have established non-commodity funds.

Globally, SWFs' total value stands at US\$10.3 trillion as of 2023, of which more than 50% is based on oil and gas revenues (SWFI, 2023). The sheer size is only increasing year after year; in fact, it nearly doubled in the last couple of years reaching an all-time high of US\$11 trillion in 2019, according to credible estimates provided by the Sovereign Wealth Fund Institute. A study undertaken by PricewaterhouseCoopers (2016, 10) correctly predicted that SWFs are expected to expand their ownership of assets in 2020 exponentially. The total value of oil and gas-related SWFs stands at US\$4.291 trillion (SWFI, 2018b). The value of SWFs in 2008 was estimated at US\$3.9 trillion, of which commodity-based SWFs were valued at US\$2.5 trillion (International Financial Services London, 2009: 1) at a time when oil prices were at their highest at US\$147.30 a barrel. Today, SWFs hold approximately double the assets that they had under management in 2008, with oil prices at approximately half the rate of 2008.

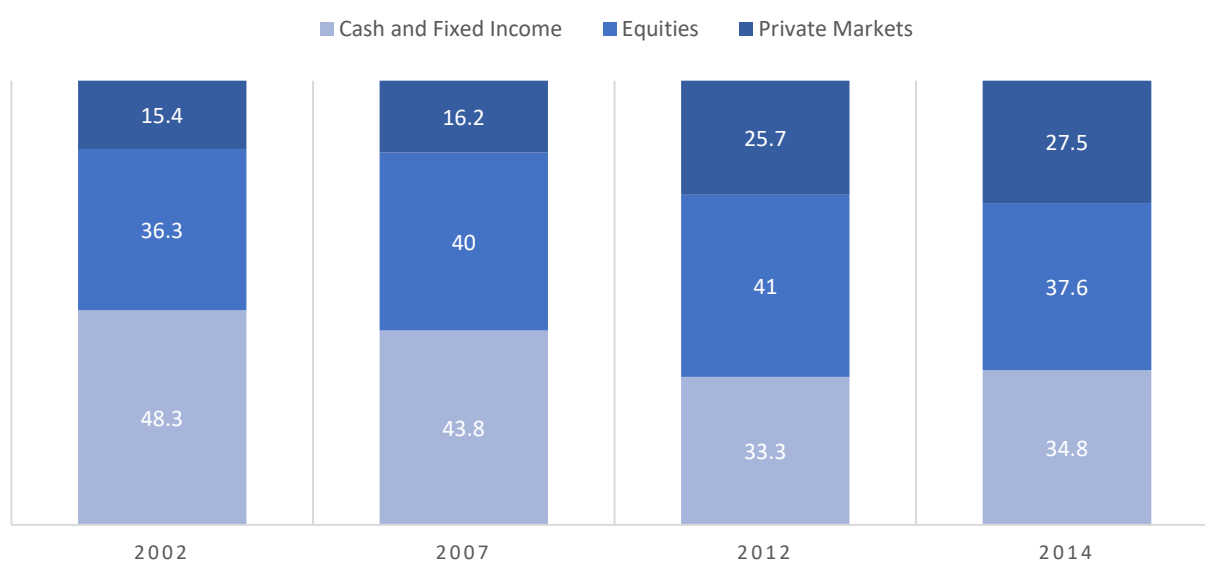
Table 3.1: Ranking of the Top Ten Largest Sovereign Wealth Funds by Total Assets

Rank	State	SWFs	Inception	Assets under management/US\$	Source of funding
1	China	China Investment Corporation	2007	1,350,863,000,000	Foreign exchange reserves
2	Norway	Government Pension Fund-Global	1990	1,259,629,434,000	Oil
3	United Arab Emirates	Abu Dhabi Investment Authority	1976	790,000,000,000	Oil
4	Kuwait	Kuwait Investment Authority	1953	750,000,000,000	Oil
5	Singapore	Government Investment Corporation Private Limited	1981	690,000,000,000	Foreign exchange reserves
6	Saudi Arabia	Public Investment Fund	1971	607,418,895,000	Oil
7	China	Hong Kong Monetary Authority Investment Portfolio	1993	514,223,020,000	Non-commodity
8	Singapore	Temasek Holdings	1974	496,593,722,700	Fiscal appropriation
9	Qatar	Qatar Investment Authority	2005	475,000,000,000	Oil
10	China	National Council for Social Security Fund	2000	473,779,060,897	Non-commodity

Source: Sovereign Wealth Fund Institute (2023)

The Assets Under Management are not the only component that has evolved; the asset allocation of SWFs has evolved too. The trend has traditionally been to invest in fixed-income stocks such as government bonds, but the 2007 financial crisis triggered a change in the asset allocation towards equities, which are riskier with higher returns. The aftermath of the crisis witnessed a substantial migration into private markets. Despite the slight changes in asset allocation between 2012 and 2014, a large proportion of assets remain invested in higher-risk assets with equities continuing to take the lead (Figure 3.2).

Figure 3.2: The Asset Allocation of SWFs 2002–2014



Source: Hentov (2015) for Official Institutions Group

The sheer size and rapid growth of SWFs challenge states in which they have invested and puts host states at considerable unease, as they question the funds' global economic power. This challenge is supported by the ability of states to use their SWFs as tools to enter the global market, which is contrary to the neo-liberal policy prescriptions of the Washington Consensus (Truman, 2008, 3). The Financial Times noted that SWFs are 'rapidly becoming a huge force in global markets and economies' (Tassell & Chung, 2007). SWFs provide a new approach to the global economic framework, one that is more inclusive in terms of global wealth distribution.

Two geopolitical trends are emerging in relation to SWF: a growing emphasis on their role in distributing wealth from developed to developing countries, as well as a rethinking of the role of governments in the management of SWFs. The question should be to what extent should governments intervene in the management of such funds. The role of governments in a free-market economy should be limited, as witnessed to a certain extent in developed economies; however, states with an SWF require prescribed policies to ensure optimal resource allocation. This is because it is the government's role to invest budgetary surpluses into the creation of SWFs. It is a government's decision whether to spend SWFs liquidity immediately and risk overheating a booming economy or to save the excess funds for a recessionary state when inflation is low. The emergence of SWFs hence signals the prominence of state institutional spending in oil-rich developing economies. What has fuelled the curiosity of observers in the West is the enormity and secretive nature of these funds. No comprehensive list exists of the full ownership of assets alongside annual reports that are not made public. As Sez nec (2012, 70) notes, in 2008, western financial consultants started to publish increased scepticism on SWFs' global dealings, as 'fabulous amounts were bandied about and increased exponentially with time, fanned by various iconic transactions'.

SWFs have been at the forefront of news in the past two decades, but they are by no means novel. The first SWF was established in 1854 — the US Texas Permanent School Fund was a result of excess oil revenues (see Table 3.4 in the appendix for a list of SWFs by year of establishment). The purpose of this fund was specific to funding education; however, the remarkable growth of the fund should be noted. The fund started with an initial investment value of US\$2 million and has reached a value of US\$56.8 billion as of 2022 (Texas Permanent School Fund, 2022). Arguably, however, the first SWF in its present form is the Kuwait Investment Board established in 1953. The aim of the fund was to provide an alternative source

of revenue to future generations in the face of uncertainties from non-renewable resources. Coincidentally, the Kuwait fund was put to the test, and after the Gulf War of 1990, Kuwait was able to rebuild the state largely because of the accumulated assets of their SWF (Rozanov, 2005). Bazoobandi (2015, 71) notes that the Kuwaiti SWF in the 1990s ‘was the main source providing financial resources for liberation and post-liberation operations’.

The sizes of the funds are diverse, from funds that are significantly large to funds that are well-established but not huge (Table 3.1 shows the top ten SWFs in terms of Assets Under Management and a full list of all the SWFs and their respective sizes can be found in Table 3.4 in the appendix). Comparing fund value to GDP provides an overview of the relative size of the fund. For instance, Qatar’s US\$475 billion SWF is double the state’s GDP, East Timor’s US\$16.9 billion SWF is nearly five times its GDP, and Kuwait’s US\$750 billion SWF is seven times the state’s GDP (SWFI, 2023; World Bank, 2021a). Such metric figures signify their systematic significance, especially as this wealth is being injected into the international financial system.

It is fundamental to highlight the multivariate role that SWFs can serve. They can be used as a mechanism to gain power over the economy while providing a political advantage. It is, in particular, the latter that has raised concern, as the political intentions and ramifications that may be exerted may cause distortion of state institutions. The widespread belief that SWFs can be used for politically driven purposes is controversial. Scholars such as Fisman (2001) and Faccio (2004) have provided empirical evidence to show that investments in firms that have political connections reap the highest returns in the market, largely due to the preferential treatment that they receive. This evidence is largely because SWFs may have domestic political connections and thus when they invest abroad, they bring with them the political dynamics associated with the institution. Sojli and Tham (2010) provide empirical evidence that SWFs outperform other investment funds such as hedge funds, noting that this is due to the provision of government-related contracts and permits; their results show the benefits associated with the political connections of SWFs. Gilson and Milhaupt (2008) have characterised SWFs as vehicles of economic, social, and political maximisation institutions. However, the Director of the International Monetary Fund’s Research Department notes that there is no cause to view SWFs as ‘destabilizing or worrying’, arguing that they exert a ‘stabilizing’ effect on the global financial system (Johnson, 2007). As the research on the political dynamics associated with SWFs developed, a larger strand of literature refuted the existence of political motivations and

unnecessary fears associated with SWFs. Avendano and Santiso (2009) have found that SWFs' investment decisions do not differ from wealth managing institutions such as mutual funds and that the basis of political motivations in regard to SWFs is baseless.

In fact, SWFs can 'balance regional and international threats or actual challenges to their power' (Lenihan, 2014: 244). Lawson (2012, 13) traces the evolution of Middle Eastern economies from marginal players in the international arena in the 1980s to pivotal ones today. After an increase in global oil prices in 1973–1974 and 1979–1980 and an investment strategy that focused on a 'portfolio of blue-chip stocks and government-backed securities in the United States... helping to prop up an American economy whose predominant position in the global order had started to erode in the mid-1970s', oil-rich economies emerged as key investors that played an extensive role in the global economy (Lawson, 2012: 13-14). He even goes on to say that the Middle Eastern governments have changed the institutional architecture by contributing to global sustained growth.

The significance of many resource-dependent states increased substantially, in large part due to the investment mechanisms of their SWFs that provided their associated states with substantive financial reach across borders that they otherwise would not have had. The Managing Director of the International Monetary Fund noted that the importance of SWFs in the international financial system is due to their ability to become 'net capital exporters' globally, particularly to developed economies; the funds have demonstrated a 'shock absorbing role' in the international financial market (Lipsky, 2008). Lawson (2012) argues that Middle Eastern states helped resuscitate Western economies through their activities in the global financial market, enhancing their positioning in the international arena. Indeed, oil-rich states in the Middle East are changing the design of international institutions and increasing the velocity of the power shift between the east and the west (Lawson, 2012). An example is the Group of Twenty (G20), which was formed to bring together key international economies to discuss international economic and financial stability. The G20 summit not only reaffirmed the need for an open global economy but also heralded 'the change in international governance structures' (Schmucker & Gnath, 2010: 8). In the past, the G8 was dominated by western states; while the creation of the G20 was very much due to the political momentum of the financial crisis, the change is indicative of a dire need for change in the global economic governance 'thus a reflection of the changing international economic realities in the twenty-first century' (Schmucker & Gnath, 2010: 15).

Every state has a foreign exchange reserve. However, securing budget surpluses as a result of a balance of payments surplus, fiscal surplus, or receipts resulting from resource exports in an SWF, rather than simply accumulating foreign exchange reserves, could prove beneficial. In the face of oil price volatility, accumulating oil rents in an SWF creates a financial buffer that can be utilised for stabilisation purposes when needed. According to Moody's for instance, in Kuwait, SWF assets can cover future government expenditure for 7.6 years and 1.2 years for Oman (Augustine, 2015). They can also stabilise the domestic currency. Instead of the traditional form of foreign exchange accumulation, SWFs can be used as an effective mechanism to keep the domestic currency from appreciating. This is an attempt to resolve one of the impacts of the resource curse theory and the Dutch Disease symptoms. Usui (1997, 153) highlighted that 'real appreciation can be avoided through sterilization and the accumulation of foreign exchange reserves'. By accumulating excess budget surplus in an SWF, instead of spending it in the short-run, resource-abundant states are able to mitigate the undesirable effects of domestic currency appreciation. Directing excess wealth into an SWF, in effect, lends support to other non-tradable goods in the state that are affected the most in resource-abundant states by the appreciation of the domestic currency. Hence, SWFs can be used as part of the state's sterilisation policy in an effort to limit the money supply.

SWFs cannot be seen as an isolated institution, but rather as part of a wider fiscal package, which involves three important components: a fiscal rule that ties expenditures and revenues, a liquidity buffer to stabilise the economy in times of oil price volatility, and a ring fence saving function to provide long-term value to future revenues. These components are crucial to the economic growth of a state, largely because they create state budget stability, protect savings, and create a positive expectation for future revenue streams. However, because the government plays a key role in the governance of these institutions, when one of these three components is neglected, the SWF can fail to perform its potentially constructive role.

A prudent fiscal policy is particularly difficult to sustain as resource-abundant states face commodity price volatility, which in effect destabilises macroeconomic policies. Resource-dependent states are prone to macroeconomic volatility and thus the aim is to provide countercyclical policies to avoid the volatility associated with resource rents. However, macroeconomic policies in many cases turn out to be procyclical, largely due to the existence of market failures or constraints that impede the countercyclical measures and lead governments to spend during booms and borrow during busts (Alsweilem & Rietveld, 2018:

41). Scholars such as Van der Ploeg and Poelhekke (2009) argue that this in part is due to the lack of financial development, which makes wealth management prohibitively challenging in volatile resource-rich states. Alsweilem and Rietveld (2018, 43) explain that the low tendency to save during booms leads to contractionary fiscal policy during slumps ‘because there are fewer fiscal buffers available for smoothing the business cycle, thereby accentuating fiscal procyclicality’. However, by establishing SWFs, resource-abundant states are able to alleviate from their resource dependence by saving resource wealth during booms in an independent fund, which would consequently allow the state to tackle their economic development and diversification prospects through their SWF without being contentiously susceptible to the vicious cycle of oil price cyclicality.

Dixon and Monk (2011, 4) argue that stabilisation can occur in SWFs’ macro-economy if they relocate ‘assets offshore, predictably integrate resource revenues into a budget allocation process, and offer counter-cyclical resources in the economy following an economic shock’. An SWF sponsors a variety of resource wealth management options, such as smoothing fiscal revenue, sterilising foreign currency inflows, and diversifying portfolio investments. Frankel (2011, 174) demonstrates that through the innovation of a specific form of fiscal institutions, the curse of procyclicality can be avoided, and the proposition that institutions are key can be biding and ‘what is sometimes missing is examples of very specific institutions that countries might wisely adopt, institutions that are neither so loose that their constraints don’t bind nor so rigid that they have to be abandoned subsequently in light of circumstances’. This form can be considered as an institutional innovation, which allows for economic stabilisation, sterilisation, and wealth transfer among many things. By addressing the causes of the resource curse that are directly related to the mismanagement of resource wealth, SWFs resemble a form of institutional innovation.

In the subsequent sections, the focus is on four different channels through which SWFs could make a difference in resource wealth management and thus counteract resource curse symptoms. The first section focuses on the state apparatus and the performance of SWFs—analysing components of success within SWFs and stressing the importance of understanding state trajectories and how the path of each state may differ tremendously from another. The second section analyses the issue of transparency and SWFs. The information on SWFs is limited by data availability; there is no uniform public disclosure of their investment activities. However, the importance of transparency and accountability has further been driven by the

Santiago Principles. Ensuring accountability prevents the misuse of resource wealth, which includes disclosing inflows and outflows, windfall diversification portfolio, and performance statistics. The third section evaluates absorptive capacity constraints, and the role SWFs can play in the deployment of excess wealth efficiently. The final section demonstrates how the diversification prospect of SWFs can play an important role in mitigating resource curse symptoms associated with volatility, as economic diversification helps economies to better withstand oil price volatility.

3.1. The State Apparatus and the Performance of SWFs

The common discourse claims that resource-abundant states have inefficient bureaucracies and public sectors (Chaudhry, 1997; Isham et al., 2005; Karl, 1997). This suggests that SWFs in oil-rich states will be equally dysfunctional and disguise divestiture. However, this is highly dependent on the individual states or cluster of states evaluated. In fact, Hertog states in his analysis that the Gulf States ‘seem to belie the received wisdom about the curse of state ownership. They offer the reverse picture... operating under unified government principals... Instead of using them as political tools, they are taking pains to signal that the business of their public sectors is only that: business’ (Hertog, 2010a: 262-67). He further argues that although cases of corruption occur, ‘it is the exception rather than the rule’ (Hertog, 2010a: 268), advising that judgements not be made about features that could be present, but are not impactful.

The Norwegian SWF, Government Pension Fund Global (GPF), is an example of a fund that is often referred to in the literature as a model and blueprint for SWFs largely due to its transparency and successful wealth management. However, the oil discovery in the North Sea came at a time when Norway was one of the most advanced economies globally, with an established welfare system, tax system, and stable state institutions. The flow of windfall revenues into the economy did not alter the structure of the economy, as the wealth was saved into what is now known as the GPF. The introduction of oil into the trade mix introduced an energy extractive sector to direct the production of the new source of wealth. Thus, when considering Norway, one might assume that a strong bureaucracy and a long history of administration are prerequisites to the creation of a successful resource wealth management institution. However, each state is unique, many have similar characteristics, but many more

do not follow a given pattern. Established on increasing resource rents, these apparatuses have in many cases changed from the traditional Weberian state model, which is based on organised hierarchies and systematic administration.

Hertog (2010a, 262) notes that the Gulf States have been surprisingly successful, as through their commodities-based SWFs, they have so far survived both oil price contractions and the global financial crisis rather well. Gulf SWFs stand in stark contrast to those of other oil-rich states such as Iran, Libya, Nigeria, and Venezuela—cases that are filled with monumental white elephants (Hertog, 2010a: 262; Canuto, 2014). The term ‘white elephants’ is used to refer to public investments that produce negative social welfare. Such investment derivatives explain the prevalence of poor investment decisions on resource wealth. Torvik (2009) notes that resource-rich economies face a challenge in explaining why the massive domestic investments have not reflected in growth payoffs. Although economic models of growth would have forecasted positive growth in relation to such substantial public investments, the economic results proved otherwise. The explanation lies in the quality of investments and not the prestige payoff; the economic rationale for undertaking an investment is unique to the needs of each state precisely why SWFs are established. What explains this relative success of the Gulf SWFs? There is no single policy that could explain the success, as one can argue that there were many contributing factors that allowed for the relative success of the funds. These include strategic investment techniques, asset allocation, the fund’s institutional structure, portfolio distribution, and overall liquidity. However, the trajectory of each state is crucial when evaluating the causes of success. The complex nature of domestic economic affairs could be a factor, along with certain strategic advantages. The underlying causes could be significantly different when analysed individually. However, Hertog (2010a, 263) argues that the relative success of the Gulf funds is explained by the ‘profit-and market-oriented management that is *autonomous* in its daily operations, hence insulated against political and bureaucratic predation, and that received *clear incentives* from a strictly limited, *coherent set of high-level principles* in the political regime’. Thus, the investment objectives along with insulation of the management of SWFs could be the cause of their success. The other oil-rich states that are mentioned in the study: Algeria, Indonesia, Iran, Libya, Nigeria, and Venezuela are said to suffer from a highly politicised public sector, lack of accountable management, and soft budgets; thus, separating profit-oriented economic planning from political motivation can provide space for economic-oriented management (Hertog, 2010a: 293). A parallel is drawn between the Gulf funds and the Asian developmental political order, which successfully

separated the working class from politics and achieved an ideal economic environment. In fact, Hertog (2010a) argues that the Gulf funds have shown that windfall revenues do not lead to institutional stagnation as resource curse theorists posit; they have instead built ‘pockets of efficiency’ understood as government institutions that deliver fiscal policy needs effectively in contexts of large inefficient institutions.

Many of these oil-rich states are developing states with weak pre-oil traditions of statehood and weak administrations and are governed in a very specific patrimonial fashion. This, of course, suggests that SWFs per se are not sufficient for ensuring a positive allocation of oil revenues. This is largely dependent on the international economic and political context, the state of international relations, and geopolitical alliances. Di John (2011, 180) highlights that the extent to which resource wealth generates outcomes is dependent ‘on the nature of the state and politics as well as the structure of ownership in the export sector, all of which are neglected in much of the research curse literature’. The political incentives are rather important; the establishment of an SWF signifies a larger picture of the institutional development of the state. Acemoglu and Robinson (2006, 129) note, ‘political elites may block technological and institutional development, because... Innovations often erode political elites’... Fearing replacement, political elites are unwilling to initiate economic and institutional change’. The establishment of SWFs shows willingness for development and change. However, the establishment of an SWF will not improve or resolve lingering issues related to fiscal and monetary policies (see Davis, Ossowski, Daniel, Barnett, 2003). An SWF will most definitely not substitute for an effective fiscal policy or existing weaknesses in the economic structure in the long run. Thus arises the question of whether the establishment of SWFs contributes to the implementation of sound macroeconomic and, in particular, fiscal policy. Davis et al. (2003, 311) argue that SWFs can ease the political acceptance of saving resource wealth and not spending it in the short run while stressing the exhaustive nature of natural resources.

However, it is undeniable that resource wealth can be turned into efficient sovereign wealth that delivers both added value to wealth and diversifies the means of production while providing an overall net fiscal contribution to wealth. In this light, it is crucial to understand that although SWFs can be a useful tool, whereby resource-rich states can benefit from their establishment, the success of the fund can only be achieved along contingent fiscal policies that will allow for the state to reap the benefits. The question is thus why do some resource-rich economies perform positively while others do not? The achievements of Norway and the

mismanagement of resource wealth in Nigeria did not occur out of a vacuum but have been the result of years of experience and demonstration. This is not limited to oil exporters but can also be applied to mineral exporters. In the examples of Botswana and Chile, two prime mineral exporters, their experiences differ tremendously from other mineral exporting states such as Bolivia or Congo. This at large depends on the wealth distribution and domestic macro and microeconomic policies that support the wealth-saving instrument established by the state. For instance, Chile was able to make national savings procyclical during the financial crisis when copper prices fell sharply; ‘saving for a rainy day’ allowed the state to moderate the consequences of the downturn. Chile achieved what some commodity-exporting states have yet to achieve—a countercyclical fiscal policy (Frankel, 2010: 30). The example of Chile can be applied to oil-rich states given that oil-exporting states are prone to volatile commodity prices. The state apparatus in large part is related to the performance of the SWF. For instance, Davis et al. (2003, 310) argue that in Chile and Norway, ‘the share of volatile resource revenue in total government revenue is significantly lower than in other countries’. Thus, they assert that in states such as Chile and Norway, ‘the problems that revenue volatility poses for fiscal management are less severe than for countries that have a heavier reliance on revenues from nonrenewable resources’ (Davis et al., 2003: 310).

The wealth management in Chile is a two-fund structure, a stabilisation fund that focuses on the short term and a savings fund that has a long-term investment motive. Consequently, Chile governs its SWFs with ‘structural balance rules’ which is a fiscal rule that ensures a structural budget balance equal to the difference between government spending and revenues, which is ultimately what determines the transfer of revenues from and to the SWF (Alsweilem & Rietveld, 2018). This fiscal rule allows for fluctuations linked to the output gap between GDP and cyclical copper prices. If the output gap and the price of copper are both positive, a fiscal surplus is permitted; contrarily if they are both negative, a deficit takes place (Alsweilem & Rietveld, 2018). Similarly, Botswana, another example has managed to use diamond rents to achieve rapid growth making it the most prosperous state in Africa (Gylfason, 2011). According to Gelb (2011, 67), Botswana demonstrates a striking example of a poor mineral exporter with strong initial institutions. The aim of SWFs is to limit the present consumption of resource wealth for an unknown future, through the implementation of fiscal rules that limit capital consumption. Nevertheless, fiscal rules implemented will differ depending on the state’s functionality and apparatus. For instance, Botswana has a ‘Sustainable Budget Index’ calculated by dividing recurrent expenditure, which includes expenditure on health and

education, by recurrent revenue, which excludes revenue from Botswana's exporting sector (Hamilton & Ley, 2011). Resource wealth is then invested domestically in infrastructure and domestic development and financial assets depending on the absorptive capacity of the state. Similarly, oil-rich states establish fiscal rules that adopt comparable policy choices. For example, Indonesia ensured cautious management of government spending during the boom oil years, 1974–81 (Gelb, 2011). Indonesia presents an example of a cautious yet flexible macroeconomic wealth management policy. The examples of Chile, Botswana, and Indonesia demonstrate how strong independent institutions, such as SWFs backed by fiscal rule, allow for positive economic performance.

Resource-abundant states are different in nature; some provide an example where political conditions are more harmonious and oil wealth can be sowed productively through investment institutions such as SWFs. The notion of 'islands of institutional efficiency' developed by Hertog (2012, 222) is a very interesting concept in situations where public sector reforms are unfeasible. The concept delivers a different perspective on resource wealth, wherein budget flexibility allows such states to experiment more with investment motives and thus institutional experimentation is viable. Even though the scale of challenges at the managerial level is much larger than that of developed countries, oil-rich states can find a way out of potential problems due to the unusually large amount of resource wealth.

An important implication when discussing state apparatus and performance is that it encompasses the limitations evident in the discourse. While discussions on state functionalities can explain why resource-rich states have underperformed, which is pinned to the suboptimal (inefficiency), it does not explain why resource-poor states have underperformed. Likewise, not all SWFs are immune against the states' apparatus and powerful regime actors; yet some have been able to avoid resource curse symptoms; examples include Chile (see Alsweilem & Rietveld, 2018; Frankel, 2011), Botswana (see Hamilton & Ley, 2011; Li, 2013), Norway (see Larsen, 2006), and Indonesia (see Gelb, 2011; Usui, 1997). This is in large part is a result of the discrete aims and objectives set at the initial establishment of the SWF; furthermore, the autonomous nature and a system of public verification avoid the issues of patronage and rent-seeking activities. This setup provides the state with a foundation that is significantly different from the public sector dynamics that are common in resource-rich states. Therefore, the establishment of SWFs provides oil-rich states with an innovative structure at the institutional level.

3.2. SWFs' Role in Enhancing Transparency and Accountability

SWFs can be an instrument for increased transparency in the allocation of oil revenues. Existing literature on SWFs has, for the most part, focused on the investment behaviours of SWFs, mostly advocating the economic motives of SWFs rather than the political motives that some allude to. An example of the latter is present in the emerging international relations literature as well as public policy scholarships, where the literature is concerned with the political objectives associated with SWFs. Another dominant theme that emerges in the literature focuses on the issue of governance and transparency. Moreover, while pundits raise fear of SWFs being used as political tools, other research has shown that SWFs are shaped quite differently. The Saudi investment fund, for instance, has 'been shaped by political considerations: to more fully support the United States and to avoid any political criticism or financial backlash' (Diwan, 2009: 347). In fact, Diwan's (2009, 355) study shows that when assessing the internal dynamic of the fund, it presents an 'incongruity' between the reality of the fund and the conventional wisdom associated with political purposes. Diwan (2009, 345) further elaborates that in the case of Saudi Arabia, a new SWF was established 'in part by a *desire for greater transparency and accountability: to further separate "private" sovereign funds from "public" ones*', in effect controlling for voracity, providing a structure for decision-making, and diversifying a resource-dependent economy. The concern over governments managing the funds and making the fund prone to corruption recaptures themes from the resource curse symptoms.

SWFs could provide a form of accountability as they provide an independent platform where resource rents can be lodged. However, transparency is a much more complex notion for SWFs globally. Transparency is linked to the price mechanism; market information is needed for investors to make a rational decision. Although there is no widely accepted definition associated with SWFs' transparency, Zhang (2016, 94) defines it as 'the level of information disclosure to the investors, the relevant administrative departments of the recipient country, stakeholders or the public in the operation of SWFs, concerning basic corporate information, management information, risk management and investment information'. Meanwhile, scholars such as Dixon and Monk (2012, 281-82) outline five classifications of SWF transparency: political, procedural, policy, operational, and performance. They make a point of stressing that each aspect may provide distinctive motives for transparency. Critics perceive SWFs as a threat to the free market with the ability to destabilise the functional efficiency of the global financial

market (Beck & Fidora, 2008). Hence, it is important for SWFs to be transparent on size, asset allocation, and investment motives to alleviate concerns associated with market distortions and reduce uncertainty in the financial market.

The introduction of the SWFs Generally Accepted Principles and Practices (GAPP), also known as the Santiago Principles, has promoted a deeper understanding of SWFs' activity. The principles aim to promote cross-border investments, maintaining stability in the financial system. Different sub-principles within GAPP promote a variety of public disclosure. For instance, GAPP 2 focuses on policy purpose (which should be clearly defined), the source of SWF funding is covered by GAPP 4.1, the government framework and SWF management team is covered by GAPP 16, a description of investment policy is in GAPP 18.3, while GAPP 19 covers investment decisions, which should be consistent within the economic and financial framework set (IWG, 2008: 7-8). The guidelines presented in the Santiago Principles are a natural reaction from the International Monetary Fund vis-à-vis the emergence of SWFs in the international financial market. Such operational transparency aims to minimise global concerns regarding SWFs' political motives. Transparency is an important tenet of the regulation of the international financial market.

To promote deeper understanding in relation to the activities of SWFs, the International Forum of Sovereign Wealth Funds (IFSWF) was created in 2008 to facilitate the understanding of the Santiago Principles. It is committed to following the International Financial Reporting Standards. This enables consistency in the international comparison of SWFs with other financial institutions. Dixon and Monk (2012, 277) recognise the Santiago Principles as 'another step in a long process of global financial and economic integration, which includes accounting harmonization and increased cooperation among regulators'.

The issue of measuring transparency was raised with the introduction of the Santiago Principles but has since been addressed in research through the creation of three different indexes:

- i. The Linaburg-Maduell of the Sovereign Wealth Fund Institute rates compliance of SWFs on ten principles, closely related to the Santiago Principles.
- ii. The Worldwide Governance Indicators of Kaufmann, Kraay, and Mastruzzi analyse six dimensions of governance in the SWF state.

- iii. The Truman-Dawson Scoreboard of the Peterson Institute is based on 33 indicators of behavioural obedience by the SWF to a social optimum structure including governance, responsibility, transparency, and management.

Each index is devised differently and thus in many cases, the transparency measurement for the same fund may differ from one index to another. The Linaburg-Maduell Transparency Index and the Truman-Dawson Scoreboard are calculated from a series of yes/no questions in which the sum of the scores represents the index for the transparency of the SWF. The discourse on transparency and the importance of disclosure is a relatively recent notion, which explains the development of such indexes. The Linaburg-Maduell Transparency Index was developed in 2008 at the Sovereign Wealth Fund Institute and has since been used by SWFs in annual reports, as well as many literature accounts that draw comparisons based on the overall score of the index.

Table 3.2: Linaburg-Maduell Transparency Index

Principles of Linaburg-Maduell Transparency Index
1. Reason for creation, origins of wealth, and government ownership structure
2. Up-to-date independently audited annual reports
3. Ownership percentage of company holdings, and geographic locations of holdings
4. Total portfolio market value, returns, and management compensation
5. Guidelines in reference to ethical standards, investment policies, and enforcer of guidelines
6. Clear strategies and objectives
7. If applicable, the fund clearly identifies subsidiaries and contact information
8. If applicable, the fund identifies external managers
9. Manages its own web site
10. Main office location address and contact information such as telephone and fax

Source: SWFI (2019b)

The index is based on ten principles that represent the transparency of SWFs; the minimum score that a fund can receive on one of the principles is one. Funds with a score of at least eight are considered to be adequately transparent. As of 2019, the Sovereign Wealth Fund Institute (SWFI) has provided ratings of 48 SWFs on its website. Exactly 50% of the funds have a score below eight and thus are considered inadequately transparent. However, the scores change depending on the information disclosure and thus changes in scores reflect changes in the fund. In the case of the Linaburg-Maduell Transparency index, the simplistic nature of the ten principles presents challenges to its quantitative robustness. The principles are very general and do not depict the true levels of transparency within a fund. They could be used to provide a general overview of what is available, such as annual reports, ownership of company holdings

and geographic locations, and total portfolio market value, but the index falls short of providing substantial substance in regard to the transparency of the fund.

The Truman-Dawson Scoreboard of the Peterson Institute was created in 2007. It uses a much more systematic ranking procedure also dependent on the availability of public information. The Scoreboard measures the SWFs in four main areas: structure, governance, transparency and accountability, and behaviour. Each of the categories has a number of yes/no questions. Truman has ranked many SWFs from 0-100. The Scoreboard examines the performance of the funds based on 33 elements and four sections. Since its inception, there have been four Scoreboards, the most recent being in 2015. The 2012 Scoreboard conveys significant progress in transparency and accountability of funds associated with the IFSWF (Truman, 2013). The table below depicts a sample size of the differences in the values of the two transparency indexes across time.

Table 3.3: Transparency Scores of SWFs

State	SWFs	Truman Scoreboard				L-M Index	
		2007	2009	2012	2015	2012	2019
Norway	Government Pension Fund Global	97	97	97	98	10	10
Chile	Economic and Social Stabilization Fund	74	86	86	91	10	10
Qatar	Qatar Investment Authority	14	15	15	40	5	5
Singapore	Government of Singapore Investment Corporation	45	60	66	61	6	7
Canada	Alberta Heritage Savings Trust Fund	82	86	86	91	9	10
Timor-Leste	Petroleum Fund of Timor-Leste	80	85	85	88	8	9
Kuwait	Kuwait Investment Authority	58	64	65	68	6	6
United Arab Emirates	Abu Dhabi Investment Authority	20	58	58	58	5	6
Iran	National Development Fund of Iran	26	26	41	48	5	5
China	China Investment Corporation	35	58	61	70	7	7
Nigeria	Nigeria Sovereign Investment Authority	12	12	18	76	-	9
Libya	Libya Investment Authority	-	-	5	23	1	4
Venezuela	Macroeconomic Stabilization Fund	-	-	27	42	1	-
Russia	National Welfare and Reserve Fund	-	-	53	49	5	-

Source: Stone and Truman (2016) and SWFI (2019b)

The initial Truman Scoreboard measured 44 SWFs. The Scoreboard for the structure category was the highest for all the SWFs with an average score of 75 out of 100. The average score for the governance and accountability and transparency category was 52. The behaviour category

received the lowest average score across all the SWFs at 36. The 2012 Scoreboard had an average score of 59 for 49 SWFs. Within the SWFs, the 26 SWFs that are members of the IFSWF scored an average of 65, while the 23 that are not members scored an average of 42. The evolution of the scores since the first Scoreboard is evident; however, some stagnation exists. For instance, the number of SWFs scoring above 80 has increased from 7 SWFs in 2007 to 12 SWFs in 2009. Conversely, the funds that have scored 30 or below has increased from 13 to 14. This is largely because of the increase in sample size and the addition of funds who are members of the IFSWF and thus adhere to the Santiago Principles; an example is the Libya Investment Authority.

The latest Truman Scoreboard that was published in 2015 includes 60 SWFs with an average score of 62 out of 100, reflecting the increase in the number of funds included in the Scoreboard. However, a significant number of SWFs have improved their transparency and accountability, in comparison to the first Scoreboard that was realised a decade ago. This can be attributed to the establishment of such a transparency index that highlighted the importance of the disclosure of information and the Santiago Principles. The scope and public disclosure of the SWFs remain limited as indicative of the transparency and accountability category of the Truman Scoreboard which includes 14 elements regarding public information on investment categories, location, currency composition, specific investments, benchmarks, credit ratings to guide investments, and the disclosure of external asset managers (Stone & Truman, 2016: 14). A major issue surrounding SWFs when the first Scoreboard was developed was the size and assets under management of the funds. Institutions such as the Sovereign Wealth Fund Institute have now provided estimates of assets under management based on public data on investments made. Although some funds provide some information in regard to their size the information remains partial. Although the quantitative nature of the Scoreboard and its 33 elements reflect a more detailed depiction of transparency in comparison to the Linaburg-Maduell Transparency Index, it does not capture the true depth of the fund. While the elements that are included in the transparency and accountability category require the disclosure of information that could be useful for the overall understanding of the fund, some elements require information such as specific investments and external asset managers that could threaten the funds' future investments if full information were to be disclosed. As the secretive nature of the fund is what makes many of their investments so fascinating to the public, competition between the funds would heighten, creating an unbalanced global financial system.

The Worldwide Governance Indicators (WGI) of Kaufmann, Kraay, and Mastruzzi (2010) measure six dimensions of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. The WGI data used to capture the six indicators are based on surveys of firms and individuals, agencies, and non-governmental agencies. Kaufmann, Kraay, and Mastruzzi normalise the data scores into a scale of 0–1 to be comparable and then normally distribute the estimates for each indicator; the scores vary from one year to another depending on domestic factors such as policies and public sector reforms. The methodology of obtaining scores from the WGI has been criticised by scholars that address the issues related to the transparency of the information in the data of the WGI. Arndt and Oman (2006) argue that the source of data in the WGI is interdependent since the indicator is an aggregate score based on several surveys and thus missing information from one source can be taken from another source. WGI is based on perceptions and not actual quantitative data, which illustrates the difficulty of measuring elements such as governance and transparency. An important factor indicative in this study but also applicable to the two transparency indexes discussed above is the inherently unobservable nature of transparency and governance. An observed quantitative measure of transparency or governance will only reflect an imperfect proxy from a broader dimension. Such aggregate indicators need to be complemented with country-level analysis to provide a nuanced analysis of the transparency of the fund. Kaufmann, Kraay, and Mastruzzi (2010, 20) notes that governance estimates are subject to nontrivial margins of error; this emphasis is intended to construct an understanding from which imperfect information can sophisticatedly be utilised.

Scholars such as Turco (2013, 16) note that ‘each different index leads to a different Transparency ranking list’ for SWFs. Others such as Gilson and Milhaupt (2008, 1355) note that SWFs’ transparency varies even within the same state. They provide the example of Singapore and the Government Investment Corporation, which publish limited information on their fund, compared to Temasek which is praised for publishing an annual report, when both funds are managed by the Singaporean government. While Zhang (2016) recognises that transparency measures are showing a significant improvement over time. He notes that Middle Eastern SWFs have experienced improved transparency scores since becoming a member of IFSWF. Significant progress has been made by member funds as they have responded to demands from the forum for greater transparency and accountability. Zhang (2016, 103) notes that the IFSWF has been successful in improving measures. The study shows improvements in SWFs from Iran, Qatar, and Oman. In addition, transparency in this region is bound by ‘the

diversity of political-economical developments, government accountability and enterprise cultures' which differs from other countries (Zhang, 2016: 118).

The IMF has developed the 'Guide on Resource Revenue Transparency', which applies the Code of Good Practices on Fiscal Transparency to address policy challenges in resource-rich states. As noted by Lipschitz (2011, 4), 'greater transparency in managing natural resource revenues can help counteract the misallocation of talent into unproductive activities'. For the development of financial institutions, transparency and accountability are key factors; Gylfason (2011) notes that the lack of transparency was fundamental in the global financial crisis of 2007. The importance of a transparent communication strategy is paramount in financial institutions. The overall aim of transparency is to clearly define structures to create productive economic activity. The problem with resource-rich states is that ill-defined structures, along with an export-extensive industry, tend to blur productive economic activity. Thus, establishing an SWF and aiming for a more inclusive transparent structure supports the management of resource wealth in the best way possible. Hamilton and Ley (2011, 140) argue that a transparent and well-directed SWF 'protects resource revenues from the voracity effect and preserves resources for high-quality spending'. Transparency should enhance the public's understanding of the structure and results of fiscal policy; this in effect makes governments more accountable for their actions, consolidating credibility and improving macroeconomic policy choices (Hamilton & Ley, 2011).

Quality institutions, along with transparency and accountability, could contribute to breaking the nexus in relation to corruption and resources by providing the conditions to mitigate the resource curse. The case of Botswana is exemplary of how resource riches do not necessarily lead to the resource curse. Li (2013, 574) notes that 'good governance, transparency and a balance between short-term needs and long-term goals can mitigate the detrimental effects of the resource curse'. Many scholars no longer place importance on transparency. For instance, Ang (2010) develops four benchmarks that include the economic and political framework behind the establishment of SWFs: legitimacy, integrated policy and liabilities, performance, and long-run horizon. He does not consider transparency as a crucial or sufficient condition to meet the legitimacy benchmarks. In fact, he argues that SWFs in the Gulf and Asia are not transparent; however, 'these countries have succeeded in establishing a stable, robust environment to ensure the longevity of their SWFs' (Ang, 2010: 6). Further, Murray (2011) recognised the importance of the voluntary adoption of the Santiago Principles by SWFs as a

step in the right direction. His criticism is towards continuing to treat compliant SWFs differently from financial investors with similar motives, which ‘will continue to present challenges for global growth, capital flows and the ultimate beneficiaries of SWFs’ (Murray, 2011: 21). The next step is for recipient countries to acknowledge the SWFs’ commitment to the Santiago Principles and treat all investors as committed members of a global forum aimed at improving transparency and accountability.

The emphasis on transparency stems from two concerns: uncertainty and market distortions in the host country. In fact, ‘it has now been recognized that transparency and accountability are the remedies’ for overcoming the resource curse (Humphreys et al., 2007: 14). Although this sentiment may be rudimentary, transparency and accountability are nevertheless key components, which provide the public with necessary information regarding the functionality and overall performance of the fund. Transparency is necessary for the efficient management of SWFs. Further, transparency and accountability not only provide a means to account for natural resource wealth but also limit ‘the scope for misappropriation and malfeasance’ (Dixon, 2016: 5). Reality, however, is much more nuanced as the political and economic dynamics of the state dictate the level of transparency. Features such as the judicial and legislative system of the state, regulatory oversight, social dynamic, culture, business environment, and overall public expectations of the government all contribute to the level of transparency that shall be exercised.

3.3. Wealth Absorption Through SWFs

Given the relative wealth of many oil-rich states in relation to their size many entail a limitation in the ability to absorb revenue windfalls domestically in the most efficient and economically sound manner. Consequently, oil-rich states face an absorptive capacity constraint, as resource wealth cannot be brought into the economy at full capacity. In the face of absorptive constraints, SWFs can play a significant role in the appropriation of strategic asset allocations within the fund. Below is a table that breaks down the function of SWFs in satisfying absorptive capacity constraints.

<i>Function</i>	<i>Objectives</i>
<i>Saving</i>	Inter-generational wealth transfer Attaining long-term vision
<i>Stabilisation</i>	Stabilise state spending against short-term volatile commodity prices
<i>Buffer</i>	Absorb funds to pace expenditures in line with absorptive capacity

The level of resource wealth is precisely what determines absorptive capacity. For instance, scholars such as Mehrara (2009) examined thirteen oil-exporting states between 1965 and 2005 by applying panel regressions. The empirical results suggest a non-linear relationship between growth in oil revenues and economic growth. The research, however, finds that there is a threshold of 18–19% on the growth rate of oil revenues, for which anything above the threshold exerts a negative effect on growth. This is demonstrative of a new take on oil abundance, where the level of the economic boom determines the blessing or curse that may affect resource-abundant states. The study also considers fixed effects, which highlights the importance of institutional quality, as differences in the institutional environments were evidently significant in the results. According to Mehrara (2009: 1169), ‘[t]he rich-resource countries suffering from a weak and undiversified economic base without stabilizing mechanisms in order to cushion shocks would be so vulnerable to boom–bust cycles, incurring costly instability’, making a strong case for the deployment of institutional mechanisms to manage oil price volatility through expanding the economic base and diversifying the economy, in order to achieve sustainable growth and insulate the economy from oil price volatility in the future. In fact, Mehrara proposes the use of an ‘oil revenue fund’ for managing oil revenues. This would in effect reduce rent-seeking activities during periods of extreme booms and ‘ensure that the funds

are spent on investments, so that the depletion of natural resources is offset by an increase in human and physical capital' (Mehrra, 2009: 1169).

The availability of large windfalls means that their deployment in the domestic economy would be inefficient in the short run due to absorptive capacity constraints. Additionally, the effects of injecting the windfall into the circular flow would be detrimental economically as rent-seeking behaviour would be undetectable due to the sheer size of the windfall, and presence of voracity would have a limited impact on the fiscal dynamics of the state. Furthermore, when SWF institutions are founded, they create separate distributional obligations from state spending, which is central to tackling a part of the resource curse argument. Gelb's (1988, 37) initial study that analysed the impact of windfall gains emphasised two important factors that ultimately determine windfall gains: the first being policy response to changes in GDP and regional distribution and the second being the response of the economy 'to the surge in demand, which will create disequilibrium in some markets'.

The absorptive capacity of oil-rich states is affected by many factors such as the level of industrialisation in the state and the nature and sophistication of the financial system; however, the price of oil is the main determinant. Depending on oil price volatility and the size of the windfall, states will react differently. Fortunately, volatility can be reduced provided that states have efficient financial systems that can cope with fluctuations in resource rents (Van der Ploeg & Poelhekke, 2009: 754). Such a role can be taken by SWFs that can work as an instrument that gets rid of excess wealth at times when the economy cannot productively deploy the windfall. Resource revenues that enter circulation can lead to hyperinflation, as the economy is unable to absorb the surplus liquidity. Van der Ploeg and Poelhekke (2009, 754) find 'a positive direct effect of natural resource dependence on growth after controlling for volatility'. Trade openness and engagement in international trade lower volatility and thus states can, in fact, turn the curse into a blessing. The key to reversing the curse is financial development, trade openness, and not being a landlocked country (Van der Ploeg & Poelhekke, 2009: 754). Simultaneously, the wealth generated from oil, the source of the curse, is placed in an SWF that could then be used as a buffer should the domestic economy falter. The function of the fund is to buffer the resource wealth from the volatile nature of resource revenues. SWFs could work as a buffer in several ways; returns from the SWF could support government spending in times of volatility, budget deficits, or times of uncertainty. Further, returns could also be aimed at specific development projects that could be affected by the nature of economic activity in

the state. For instance, when the Norwegian SWF's revenue exceeds the resource wealth in the fiscal budget, wealth is deposited in the SWF; otherwise, wealth is transferred to the annual budget (Norges Bank Investment Management, 2018). This utilises resource wealth, in order to fulfil government spending needs and support the state's needs during periods of external volatility.

Resource-abundant states face the problem of absorptive capacity, especially during periods of high commodity prices. Governments are inclined to increase spending during a windfall, without sufficiently planning investment methods that reap future returns. Similar investment channels may prove limited or insufficient for the deployment of large capital wealth inflows. A means of counteracting issues associated with absorptive capacity constraints is through an SWF (Dixon, 2016: 5). In principle, SWFs provide a consistent and effective form of saving a resource windfall. As Dixon (2016, 5) notes, the aim is to discipline spending on the part of the government and 'smooth natural resource revenues over the commodity price cycle'. In such instances, an SWF can work as a self-restraint mechanism on behalf of government spending. Norway is exemplary of countercyclical government spending on resource revenues (Arezki, 2011). The problem is that many resource-rich states base government spending on the significance of the resource windfall, which is problematic due to the volatile nature of the commodity. Resource windfalls spur government spending, which in effect expands the non-resource sector, where supply is inelastic; this leads to an increase in the price of non-tradable goods, which as a result leads to an appreciation of the real exchange rate affecting competitiveness and position of the non-resource sector, which is consistent with the Dutch Disease.

Resource-rich states that do not control government spending are prone to macroeconomic instability that could in effect harm long-run economic performance. Large increases in government spending risk inefficiencies such as yielding unproductive factors of production and resource misallocation. The literature has provided evidence that large resource windfalls along with government spending lead to weak long-run economic growth. However, Arezki (2011, 158) provides findings that contribute to the discourse on government spending in that resource revenues stop negatively affecting long-run economic growth when controlling for government spending. He further notes that the impact of resource revenues on government spending is moderated by the existence of quality institutions with a high level of accountability and checks and balances to manage resource revenues. His results demonstrate the importance

of government spending as a vehicle of the resource curse as ‘the externality stemming from the resource sector to the nonresource sector is mainly conveyed through government spending’ (Arezki, 2011, 158). Thus, states that consider government spending and absorptive capacity constraints not only avoid the inefficiencies and the misallocation of resources but also limit the real appreciation of the domestic currency and stabilise the tradable sector of the economy.

3.4. SWFs and Economic Diversification

SWFs not only provide resource-abundant states with a diversified investment basket, but also provide diversified benefits when it comes to oil-price volatility; they act as a buffer in the face of potentially damaging oil price fluctuations. As Kamrava (2012a, 8) argues, SWFs ‘are being employed to foster economic diversification’. He further illustrates how SWFs are fundamental institutional foundations that act, as international investment instruments, which are needed to sustain growth at a time when oil wealth is limited. Schwartz (2012, 520) notes that SWFs can benefit economies that are highly dependent on large-scale resource exports in three ways: they could act as buffers from price volatility, which is characteristic of the nature of the export, they help diversify the economy, and they could help counteract the Dutch Disease by ‘sterilising’ temporary increases in windfall revenues. Other scholars such as Larsen (2006) analyse how deliberate macroeconomic policy interventions, the quality of political and economic institutions, a strong judicial system, and social norms have contributed to the avoidance of the resource curse and the Dutch Disease in Norway for more than two decades.

Norway has the world’s largest SWF, the Government Pension Fund Global, with total assets reaching one trillion. The GPF is a resource-backed fund with one of the most advanced investment strategies and the most transparent institutional frameworks. It is identified as the model of best practice by scholars who prioritise the role of the Norwegian SWF (see Davis, Ossowski, Daniel, & Barnett, 2001; Gupta, Segura-Ubiergo, & Flores, 2014; Gylfason, 2004). The state apparatus of Norway is a democracy. Their development strategy was in place prior to the discovery of their resource windfall. They already had a diverse non-tradable manufacturing sector, which combined with a stable government, provided a positive environment for their SWF. The Norwegian SWF is autonomous to state fiscal policy but can fund the government budget and contribute to national savings. The amount transferred to the

fund is determined by an annual budget allocation, designed by the Ministry of Finance and Norges Bank Investment Management. Oil windfalls are invested in the fund, minus a withdrawal, which is estimated as the SWF's long-run real return at 4%. This is a fiscal spending policy run on the basis of allowing a 4% transfer of investment revenue to the state budget. The annual budget is designed under the assumption of null resource wealth; the non-oil budget can only run a deficit of 4%, which is equal to the transfer from the SWF. Under Norwegian state control, the SWF is audited to the same high standard, providing Norway with the highest transparency score globally. Therefore, when assessing the diversification prospects of SWFs and their development, it is important to consider the state trajectory prior to the discovery of a resource windfall.

Fundamental to their success is Norway's stage of development prior to establishing its SWF. Larsen (2006, 605) notes that it was in the 1980s that Norway took a different route from its highly similar neighbours; this was 'an escape of the Resource Curse'. This route consisted of three factors: 'fiscal discipline, debt repayment and the establishment of a Petroleum Fund' (Larsen, 2006: 631). In fact, growth only accelerated after the discovery of oil in the North Sea, thus making it clear that oil was the engine of growth. Therefore, the case of Norway where oil acted as an engine of growth highlights the significance of the management of oil rents. The question that seems to be asked, recurringly, is what did Norway do, or how can the Norwegian Model be imitated? However, the uniqueness of oil discoveries and each country's trajectory deserve fundamental attention. Each resource-abundant state has a trajectory of its own, allowing states to reap the windfall at different stages of development. However, two fundamental lessons can be learned: first, investing resource windfalls outside the domestic economy shields the domestic economy from the spending effect, while limiting real appreciation. Second, a concept that many resource-rich states may benefit from if applied, is income coordination. In essence, this will allow for the internalisation of externalities resulting from inter-temporal adjustment problems in the extractive-led sector versus the traded goods and manufacturing sectors. These two fundamental points have been illustrated by: Norway: first, the reallocation of factors of production from industry to extractive-led sectors of the economy and public service did not occur at a fast rate and thus competitiveness was maintained and Dutch Disease symptoms, such as the appreciation of the domestic currency from the spending effect, were avoided. Norway has made the manufacturing sector of the economy the wage leader, as opposed to the norm in resource-rich economies where the extractive-led sector would be best paid (Larsen, 2006). Scholars such as Larsen (2006, 636)

argue that rent-seeking activities are the pathogens of the resource curse, while social norms and transparency, along with the rule of law, contribute to the limitation of rent-seeking activities. Norway has avoided the resource curse by maintaining three factors: labour placements in industry, avoiding spending, and spillover effects (Larsen, 2006).

The focus on asset diversification within SWFs includes diversifying away from domestic economies to hedge against idiosyncratic risks (Brown, 2009). Each SWF has a long-term return objective through a strategic diversification strategy with the aim of increasing returns substantially over initial asset allocations. The introduction of modern portfolio theory by Markowitz (1952) provided financial actors with an optimal allocation of assets based on their risk tolerance. Diversification of the portfolio and lowering the aggregate risk of assets was the cornerstone of Markowitz's theory. This dynamic could prove useful for conducting optimal asset allocation for case-specific SWFs, in order to test whether the fund is under-diversified.

Resource wealth has proven promising when the management of wealth is efficiently scrutinised. For instance, Nigeria was notorious for its mismanagement of resource wealth; early studies such as that by Sala-i-Martin and Subramanian in 2003 have highlighted this. However, such studies fail to account for the progression in growth experiences; today, Nigeria demonstrates a much brighter picture. To put facts into perspective, in 1973–1983, Nigeria experienced its first oil boom, which proved to be futile, but the subsequent oil boom in 2003–2008 was much more productive (Clark, 2011). In fact, it is viewed that economic reforms to diversify Nigeria's economy had a large role in the improvement of the allocation of resources and lifting economic growth. According to a United Nations Development Programme Administrator, Nigeria's GDP per capita increased by 45% from US\$1496 in 2000 to US\$2135 in 2010 compared to a minimal increase in the last decade (Clark, 2011).

However, Wills, Senbet, and Simbanegavi (2016) believe that domestic issues should be addressed first to help developing countries to meet the more pressing needs of the present, arguing that resource revenues should fund domestic investments and accelerate the developmental path of the state. Nonetheless, the objectives of funds to smooth government spending and avoid resource price volatility are not dismissed, but rather blindly following other states' investment techniques should be avoided. Wills et al. (2016), however, stress that the inter-generational transfer motive of SWF should not be paramount for developing states. This is problematic, as many developing countries' SWFs state explicitly that they aim to create

long-term value for intergenerational wealth transfer; examples include Qatar, Indonesia, Nigeria, Singapore, and Saudi Arabia.

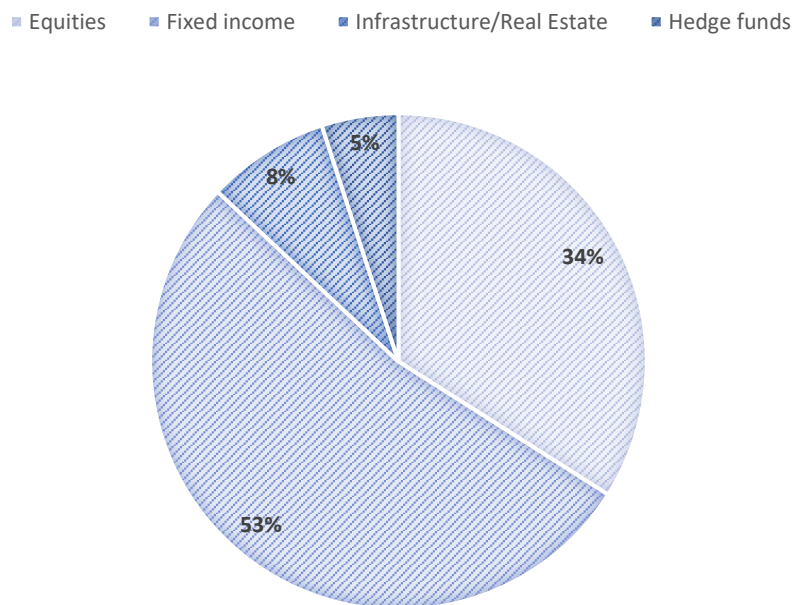
The concern that many resource-abundant states' leaders face in regard to oil wealth not extending to the next generation is apparent in a speech by King Faisal of Saudi Arabia: 'In one generation we went from riding camels to riding Cadillacs. The way we are wasting money, I fear the next generation will be riding camels again' (Gylfason, 2004: 26). Resource-abundant states share the same quandary when it comes to resource wealth despite cultural, geographical, or political differences. While the internal administration of an SWF is questionable, internal conditions are often altered and modified according to the needs of the state. This casts doubt on the need for internal conditions of SWFs to be explicit and whether SWFs should rather invest depending on their needs and future aims, regardless of their motive, whether it is stability, preventing oil price volatility or resource wealth sterilisation.

SWFs are explicitly tasked with contributing to diversification through their investments under their mandates. Alswilem, Cummine, Rietveld, and Tweedie (2015, 18) argue that the need to transform resource wealth 'to financial assets comes from the diversification principle, the volatility of resource prices (and revenues), the finite nature of resource wealth, and a belief that financial assets may have a higher risk-adjusted return than natural assets'. The benefits of wealth diversification are fundamental, particularly as the SWFs assets are uncorrelated to resource wealth and also as an effort to sustain wealth when resource wealth is no longer the main source of wealth. Diversification ensures economic and social prosperity and hence transforms wealth into productive structures. SWFs contribute to diversification through their investment strategy that relies on a wide variety of investments within their portfolio. This balances unsystematic risks, hedges against market volatility, and reaps higher long-term returns.

To gain a better understanding of the reality of SWFs asset allocation, the survey conducted by the IFSWF is analysed. The surveyed funds are representative of different fund types across the world; despite the differing investment objectives and geographical locations of the funds, their asset preferences are indicative. As presented in Figure 3.3, the traditional investment categories of equities, government, and corporate bonds are substantial, but the funds are more heavily weighted towards fixed income than stocks (IFSWF, 2016). Infrastructure, real estate, and hedge funds are significantly smaller in share of assets. Furthermore, the distribution of

specific asset classes across geographical regions is largely skewed towards the United States, the United Kingdom, and Japan, which could be because they occupy the largest markets measured by market capitalisation according to the International Forum of Sovereign Wealth Funds (2016).

Figure 3.3: The Average Asset Allocation for SWFs



Source: IFSWF (2016)

There are two sectors that have historically been dominant in the allocation of portfolios: financial market investments and real estate. According to Castelli and Scacciavillani (2012, 89), SWFs such as the Abu Dhabi Investment Authority (ADIA), the Kuwait Investment Authority (KIA), and the Government of Singapore Investment Corporation (GIC) have been investing in real estate; although considered less liquid and risky, it is a good hedge against inflation and an important asset class to ensure diversification for long-term investors such as SWFs. The mandate of the fund directs the diversification prospect; for instance, saving funds tend to have a more diversified investment allocation, suited to their long-term investment horizon, and returns are also expected to be higher. The Norwegian SWF has an asset allocation of 60% in equity, 35% in fixed income, and 5% in real estate, with a long-term return on assets of 5% per annum (Norges Bank Investment Management, 2011). Funds with a more diversified investment allocation report higher returns such as the Government of Singapore Investment Corporation which claims to have a 20-year nominal return on assets of 5.7% per annum (GIC, 2017).

Economic diversification is critical for resource-abundant states as it encourages growth by introducing new economic activity and avoids dependence on resource wealth (Gylfason, 2011). Diversifying asset allocation by SWFs is therefore efficient. A combination of assets that are not correlated in a portfolio will provide the most efficient return, given the volatility of resources. Diversifying investments further eliminates idiosyncratic risks associated with assets; although ‘systematic’ risk cannot be avoided by diversification, it all depends on the funds’ risk appetite (Alsweilem & Rietveld, 2018).

Scholars such as Ang (2014) argue that it is because of diversification that rebalancing can take place. Rebalancing is a countercyclical investment strategy where investors buy low and sell high, which can only take place when the portfolio mix is diversified, as what is described as ‘free lunch’ can only be applied if ‘diversification gets you a benefit in one period, but this diversification benefit dies out if you do not rebalance’ (Ang, 2014: 154). The concept of rebalancing is backed by considerable research both empirically and theoretically (Ang, 2014).

The economic diversification that SWFs can contribute to further questions the negative association between oil revenues and economic development. As Hertog (2012) expresses, this perception is ‘crumbling’, especially for oil-rich states in the Gulf, where the growth of SWFs highlights a shift in the movement of capital around the world—a phenomenon previously only associated with developed economies. The rise in commodity prices and the growth of emerging markets have completely altered the global capital market. In the case of the Gulf, most of the states are relatively novices to the structure of global finance and are undertaking a conscious effort to establish themselves as wealthy nations and leading powers in the global international system through their SWFs. This requires a guideline for operations, which in effect requires a degree of transparency. It also leads SWFs to focus on their core mandate, which is maximising their returns. Thus, such a form of transparency encourages and boosts the commercial return of the fund.

3.5. Rethinking the Resource Curse Through SWFs

Economic policy changes have been one of the key variables that have allowed some resource-abundant states to avoid the resource curse. This has been the focus of many scholars that have emphasised the need for resource-abundant states to adopt specific macroeconomic policies, in an effort to avoid foreign and domestic debts, control inflation, accumulate fiscal revenues, and promote competitive exchange rates, which are particularly important for the avoidance of the Dutch Disease (Mikesell, 1997; Usui, 1997). It is recommended that the export windfall is channelled into a fund, in order to prevent cyclical increases in domestic spending (Mikesell, 1997: 194).

Scholars such as Sarraf and Jiwanji (2001, 17) note that resource-abundant states need to have a prudent economic management system in place, which in effect will help in mitigating the resource curse. Further, they advocate for the perusal of effective investment strategies, where investments are made based on the states' absorptive capacity while considering all recurrent costs needed to undertake the investment and investing only when the expected rate of return is significantly above a less risky alternative investment (2001, 8). For instance, Seymour (2000) has recommended an emphasis on stabilisation funds to guard against volatile commodity prices.

Some scholars recommend that international efforts be made to mitigate the resource curse. Such efforts include international agreements to control commodity prices; however, such efforts have failed and are therefore not seen as a viable solution (Ross, 2001). International organisations such as the IMF's Compensatory Financing Facility and the European Commission's Stabex Facility were created with the aim of assisting resource-abundant states manage commodity price volatility, but with little to no effect (Bannon & Collier, 2003: 10). Instead, Bannon and Collier (2003: 10) suggest that international organisations such as the IMF and the World Bank implement a new mechanism or restructure existing ones to help resource-abundant states with commodity price volatility. Gupta, Segura-Ubiergo, and Flores (2014, 5) observe that Australia, Botswana, Canada, Chile, and Norway are all examples of resource-rich states that have successfully leveraged their natural resource wealth and increased economic development along with improving domestic standards of living. The study further stresses on three principles that are needed for the successful management of resource wealth: transparency, policies that impede political interference, and quality institutions to manage

resource wealth and create productive assets (Gupta et al., 2014: 6). Norway, for instance, has been able to avoid the curse because of its well-established political and economic institutions that ensured that the economy could protect itself from the oil windfalls and thus the government spending and displacement effects were diminished (Larsen, 2003: 16). Similarly, Botswana managed to avoid the economic challenges that export booms lead to by adopting appropriate macroeconomic policies. The policies have been centred on two main objectives: avoiding balance-of-payments crisis on the one hand, and promoting diversification on the other (Hill, 1991). The temptation to spend the resource wealth was avoided and instead accumulated as foreign exchange reserves. According to Sarraf and Jiwanji (2001), Botswana was aware that a common challenge that resource-rich states experienced was an appreciation of the domestic currency, which would in effect reduce the competitiveness of other sectors of the economy; to avoid this, foreign exchange rates were managed. Botswana illustrates how prudent economic management and the avoidance of common problems associated with export booms can help mitigate the detrimental effects of the resource curse. The country used exchange rate as a tool to enhance economic diversification; resource wealth has allowed Botswana to witness the world's fastest growth in GDP and improved the state's overall standard of living (Sarraf & Jiwanji, 2001: 17).

Similarly, Australia and Canada significantly benefited from resource exports in their initial stages of economic development (Auty & Mikesell, 1998). Resource wealth has also transformed the quality of life in Norway to the highest quality of life today (UNDP, 2009b). Di John (2011, 175) argues that the strong bureaucracies in Norway, Australia, and Canada ensured the management of resource wealth, which played a substantial role in enhancing growth and stimulating capital accumulation in their early stages of development. The establishment of SWFs today acts as a safe haven for wealth that has been utilised for development needs and is now best diversified in an independent institution. The state trajectory is crucial in explaining the journey of the state with its resource wealth and what it has been able to establish and modify in the process.

Other scholars such as Wills et al. (2016) highlight three critical reasons for resource wealth to be invested in an SWF: intergenerational wealth transfer, stabilisation, and political accountability. Among the many purposes that they serve, SWFs protect state budgets from short-term volatility in commodity prices. For example, having political accountability creates barriers to accessing the fund, reducing the misuse of resource revenues by political actors

(Wills et al., 2016). Furthermore, Wills et al. (2016) note that for over a decade, developing countries have been advised to follow ‘the Norwegian model’, which requires resource rents to be saved abroad in an SWF for future generations; this leads to political accountability and portfolio diversification and counteracts Dutch Disease symptoms.

Not all resource-rich states have failed. Many offer examples of successful utilisation and management of resource rents, while others pose a challenge to the resource curse theory. For instance, ‘thirty years ago, Indonesia and Nigeria—both dependent on oil—had comparable per capita incomes. Today, Indonesia’s per capita income is four times that of Nigeria’ (Stiglitz, 2004). Therefore, the relationship between resource abundance and economic growth is not as conclusive as the resource curse theory suggests.

While this study does not dismiss resource curse features, the theory remains to be too simplistic, inadequate, and outdated. SWFs are significant financial actors that will only continue to grow in size and importance. By rethinking the resource curse theory through SWFs, this thesis challenges the view that the resource curse argument is sufficient. A number of factors are introduced into the equation when oil-rich states are assessed through their SWFs: (i) what policy adjustments take place and what role they can have on the domestic economic environment, (ii) how can states insulate from exchange rate fluctuations, and (iii) government spending of windfall revenue in the short-term vs. long-term.

The experiences of the global financial economy over the last decade and the instability of the global commodity markets offer a few lessons. SWFs can help protect the non-tradable goods sector by stabilising currency fluctuations, a factor seen as inherent in the resource curse theory. Further, the decision of governments in resource-abundant states regarding the use of resource rents directly affects whether this wealth will contribute to the benefit of the state in the long term or work against market forces. Deploying mitigating measures and economic strategies that cater to the requirements of the state are crucial to the efficiency of SWFs.

Rethinking the impact of resource abundance on economic growth through a critical approach introduces institutions such as SWFs into the resource curse discourse and allows resource-abundant states outlets to manage resource wealth. Attention to the role of institutions and institutional quality allows for a meaningful understanding of the impact of natural resource rents on economic development. They enable a better analysis of the varied experiences of

natural resource-rich countries and their success and failures in achieving economic growth, thereby moving the discourse on oil economies away from the deterministic assumptions and conclusions of the resource curse framework.

The reductionist approach of the resource curse hypothesis and lack of clear policy implications is highly problematic. Ruminations of resources themselves question whether resources *per se* should be blamed for slow economic growth, rent-seeking, and corrupt behaviours. As demonstrated in the previous chapter, the management and governance of resource wealth play a fundamental role in determining the growth and developmental outcomes of natural resource wealth.

SWFs provide a more nuanced approach to resource wealth management, even though its fundamental reliance on resource windfalls to underwrite asset allocation remains. The contributions of SWFs potentially include political accountability and portfolio diversification of investment returns alongside maintaining the real exchange rate through deploying government wealth into productive sectors, instead of allowing resource windfalls to spur government spending and lead to Dutch Disease symptoms. SWFs act as a buffer, improving macroeconomic management and increasing domestic savings. Such benefits need to be considered alongside resource curse themes, in order to present a better analysis of the institutional compositions and their effects on resource-rich countries. Therefore, while some resource curse characteristics remain relevant, the resource curse theory needs to be developed alongside the developed policies of resource-abundant states that are continuously changing and evolving in response to the different challenges experienced.

The preceding sections make evident that there are substantial gaps and limitations in the resource curse argument. The account demonstrated an interrogation of previous research and introduced the role of institutions for a detailed account of how resource management institutions such as SWFs could be instrumental in the economic development of resource-abundant states. The resource curse theory is in need of a new approach; rather than rejecting preceding research, a better approach is to identify the weaknesses and limitations and add to and extend beyond the common rhetoric.

The basic resource curse theory is not adequate to explain the complexities and processes in the development and growth of oil-rich states. Rather, the interaction between natural resources

and development needs to be viewed within the dynamic context of the role of state governance of oil income and the formation of quality institutions, where the outcome is highly case-specific and context-dependent. SWFs can, thus, be viewed as an institutional response to the challenges of resource wealth management. These ideas are explored further in the following chapters where the development trajectory of oil-rich states and the investment strategies of their associated SWFs are analysed in greater detail in the context of case-specific studies.

4. Investment Pragmatism as the Engine of Economic Growth

The previous section presented an interrogation of the resource curse theory and introduced the role of institutions, including SWFs, as an instrumental development tool in resource-rich states. The chapters highlighted the reductionist approach of the resource curse hypothesis and its inability to differentiate between the experiences of various resource-rich countries and to envision a dynamic prospect for oil-producing economies. The question arises of whether resources should assume the blame for slow economic growth, rent-seeking and corrupt public, and private sector behaviour. In this context, it seems that, among its many critiques that have developed over time, the resource curse theory seems to misplace the dynamics of rent with those of resources, and as such problematises resources only as far as they become a source of rent generation. Arguably, it could be framed as a *rent* curse theory rather than a resource-focused one.

Accordingly, to emphasise the evolving nature of policies and the dynamics of institutions in oil-rich states, this thesis highlights the role of SWFs as a potentially valuable corrective response to some of the challenges associated with resource rent management. It reinforces the weaknesses of the existing frameworks for analysing resource-rich economies and the need to develop models that can offer a more dynamic conceptualisation of the national and global contexts in which such economies operate.

Questioning the resource curse framework allows for a comprehensive understanding of the innovative wealth management methods proven to be achievable. In this regard, there is much to be learnt from developed and fast-developing oil economies and their continuous learning curve. The role of SWFs in such economies in preventing fiscal cyclicity and maintaining macroeconomic stability while providing an economic diversification prospect and ensuring intergenerational wealth transfer is of particular interest. The prudent management structure and effective investment strategies of SWFs are expected to stabilise spending during volatile commodity prices. In the wake of commodity price declines, a limited number of resource-rich countries, such as Norway, have demonstrated countercyclical government spending with respect to resource windfalls primarily due to the workings of their SWF. This approach has contributed to long-term stability by enabling a smoother recovery from the cyclical nature of oil prices (see Alsweilem & Rietveld, 2018; Arezki, Gylfason, and Sy, 2011). Moreover, SWFs allow for a more transparent, high-quality institution to manage resource wealth while limiting

political interference and enforcing accountability and transparency in using the country's national resource rents.

This chapter scrutinises the creation of SWFs as a component of the evolution of investment strategies in oil states. It assesses whether they have played an influential role in overturning the adverse effects of resource rents. In doing so, this research focuses on examples of policy evolutions within resource-rich states, specifically, the investment strategies of the SWFs, while offering an assessment of their dynamics, strengths and weaknesses compared to those in non-oil-producing economies. It investigates whether an SWF's source (hydrocarbon-based or otherwise) affects wealth management and examines the type and nature of investment strategies it undertakes. By analysing a commodity-based and a non-commodity-based SWF to enable an improved understanding of whether the source of the SWF's finances has any bearing on the success and failure of its investment strategies. This will help in the understanding of the broader systemic factors influencing wealth management within the oil-rich states' institutions and in return how institutions can shape a country's development outcomes. Although the focus is on the specific impact of the 'source' of the fund, its management, operation, and effectiveness, this is undertaken based on the assumption that all other factors (beyond the source of the funds) are held constant. The study focuses on two economically similar case studies that share a wide range of commonalities to reduce the extent of assumptions required.

The contribution of the following two chapters is twofold: first, they further expand the limited literature on SWFs by providing a dynamic approach to analysing institutions and investment strategies; second, they contribute to an improved understanding of investment techniques and policies in the oil-rich Middle Eastern states that are usually under scrutiny for their economic and investment strategies. As such, this is an innovative study in the field of SWFs as it focuses on a set of institutions rarely studied in association with the resource curse. It contributes directly to the evolving discourse to include Qatar as a resource-rich country and Singapore as a non-resource-rich country. The focus is on the SWF of Qatar, where elements of the Singaporean SWF are analysed in order to highlight the differences and similarities between a commodity-based fund vis-à-vis a non-commodity-based fund. The resource curse theory believes in the effective governance of non-resource-rich countries, therefore analysing the institutional dynamics of a non-resource-rich country and whether differences exist addresses the resource curse argument of governance and performance and whether there is evidence to

suggest that resource-abundant states misuse their wealth compared to states that lack resources. Qatar and Singapore are two small open economies with similar macroeconomic, geographic, and economic features. The following chapter will analyse their respective SWFs and the difference in the latter's performance and contribution to its national economy and long-term fiscal sustainability (Le Borgne & Medas, 2007). Analysing the differences and similarities in fiscal, foreign borrowing and exchange rate policies of commodity-based and non-commodity-based economies. This approach allows for an understanding of the dynamic nature of macroeconomic management and investigate whether, ultimately, the policy approach differs between a commodity-based and a non-commodity-based economy.

As of 2022, the total volume of assets under the management of SWFs worldwide is estimated at US\$10.2 trillion, of which over 50% are based in oil and gas (SWFI, 2022). The research focuses on the SWFs of two small open economies and financial centres: the Qatar Investment Authority and the Government of Singapore Investment Corporation, ranking ninth and fifth globally as of 2022 in terms of assets under management. The critical distinction is that while the QIA is a commodity-based SWF, the GIC's funding source is not commodity-based. Despite the differences between oil and non-oil producers' economic objectives and fiscal strategies, they both share a common rhetoric: smoothing long-term consumption. For example, oil producers must constrain government consumption in boom periods to smooth consumption in bust periods (Alsweilem & Rietveld, 2018). This highlights the pressure on oil-producing states' ability to effectively invest, finance and utilise oil wealth in the present. Resource wealth positively affects the economy when government spending is controlled. Arezki's results suggest that government spending is an essential factor of the resource curse hypothesis (2011, 158). The burden is significant on oil-producing states primarily due to the volatile nature of oil prices and the externality that resource revenues convey through government spending. Non-oil producers, however, do not face the same challenges. For non-oil producers, the financial market's uncertainty dictates government consumption.

The increasing appeal of SWFs to oil-rich states comes with disparities in the institutional establishment, not simply because of institutional differences but also because of the differences in the amount of resource rents each state generates. Although institutional reforms are a fundamental component of state-building, deploying wealth in an institution that can muster economic wealth to sustain and maintain wealth is a complex matter. Wealth is a component of state power, provided that it is continuous. However, with wealth generation

comes the risk of excessive spending and the mismanagement of wealth, ultimately leading to the externalities associated with the resource curse theory. Resource wealth is not exogenous; thus, the relevant question is how to manage wealth in the best way possible. Although wealth differs in degree, the economic and institutional outcomes drawn by the resource curse theory place the burden on the degree of resource wealth. Thus, the assumption of an inverse relationship between resource wealth and economic growth has been established. This assumption dismisses the potential of investment vehicles such as SWFs in stabilising and subsidising the negative consequences of resource dependence. However, the duality of saving and providing financial stability gives SWFs extensive economic weight. This phenomenon and their potential to provide their home states with the opportunity to invest in global markets makes an analysis of SWFs' role in oil-rich states a fascinating exercise.

What stands out in academic debates in this field is how under-researched SWFs are. Scholars in political economy, management studies and international relations have only recently turned their attention towards financial institutions such as SWFs. It appears that prior to the 2008 global financial crisis, the literature on SWFs was dormant and only afterwards a surge in interest and research emerged. The increase in the size and number of SWFs in the twenty-first century's first decade can be attributed to the rising commodity prices that have enabled oil-rich states to accumulate wealth and increase foreign exchange reserves (Bahgat, 2010). Schena, Braunstein, and Ali (2018) argue that the establishment of SWFs is 'supply-driven' essentially to absorb accumulated resource wealth and manage a surplus in the current account that would not be overseen otherwise. We are also entering a new phase where the spur in SWFs is not simply supply-driven but demand-driven – reviving domestic investments and thus encouraging economic growth (Divakaran et al., 2016; Schena, Braunstein, & Ali, 2018). The secretive reputation of the funds has been one of the reasons why the research realm has swayed away from analysing many aspects of SWFs that demand questioning. Scholars are confronted with a critical dimension of SWF analysis and a broad set of questions, but with limited data, which is challenging.

This chapter seeks to reconstruct the understanding of the resource curse theory and the role of oil-rich states to; (a) highlight the role of SWFs as vehicles of change and (b) challenge the resource curse theory's simplistic assumptions and question the assumed relationship between resources and the notion of a 'curse'. The aim is to understand SWFs' investment strategy and pragmatism through (a) evaluating their economic performance as wealth management

institutions and (b) analysing whether a difference exists between resource-rich and non-resource-rich investment strategies and the performance of their respective SWFs. Whether SWFs of either Qatar or Singapore prefer small shares in different sectors with high rates of return on equity or other asset allocation strategies remains to be seen. Ultimately, the analysis focuses on whether there is evidence to suggest that resource-abundant states misuse their wealth compared to states that lack resources.

The resource curse hypothesis is concerned with economic outcomes and growth sustainability. The importance of institutional quality in the literature on the resource curse is the factor that essentially determines whether resource wealth promotes or undermines economic growth. The SWF model can provide a promising institutional dynamic that can contribute to improved economic performance if it is embedded in a countercyclical rule-based fiscal framework that governs the resource windfalls' direction into the fund and the investments and flow of wealth out of the fund. The IMF (2015) has highlighted that the role of SWFs in resource-rich states should be viewed as part of a rule-based fiscal framework. By analysing SWFs in this manner, an assessment of the potential contribution their institutional arrangements can provide with respect to resource wealth management can be gained.

This chapter builds a case for an inclusive discourse between case-specific resource-rich states that are under scrutiny and are often overshadowed by the discourse for their substance and accountability. It argues that SWFs act as a corrective instrument to the conventional wisdom associated with resource abundance. It analyses the extent to which SWFs are influenced by global economic pressures and whether they echo or refute the resource curse theory's assumptions, pointing to the ability of institutions to shape outcomes, and discusses the implications of broader systematic changes that influence wealth management.

Chapter Four proceeds as follows. The first section discusses the operational governance structure of SWFs. The second section discusses the countercyclical rule-based framework, which counteracts economic fluctuations and can be considered the ultimate SWF blueprint. It includes operational performance and approaches that can help integrate SWFs effectively into the country's broader fiscal framework. The third section examines the Norwegian model and why it is considered a blueprint. It includes documentation of the most important state institutions that play a role in the Norwegian model and desirable institutional and structural arrangements that have proven beneficial and can be incorporated by other SWFs to enhance

their performance. The final section discusses the potential of oil rents. Chapter Five introduces the case study of Qatar, providing a brief overview of the country's economic position and performance and the impact of the 2017 blockade on the economy to contextualise subsequent discussions on its SWF, the QIA. The second half of the chapter brings in elements of Singapore's SWF, the GIC analysing their performance indicators, investment portfolios and strategies, and response tactics to economic challenges within their macroeconomic framework. It draws on the discourse and whether the investment techniques, long-term vision, and response to challenges of an oil-rich state SWF differ from a non-oil-rich state SWF.

4.1. SWFs Operational Governance Structure

In general, SWFs are established for one of three reasons. The first is to hedge against volatile commodity prices. The second is to diversify the economy. The third is to act as a saving vehicle to save current wealth for future generations. These causes are not mutually exclusive, and many SWFs are established and include all three purposes in their mandate. However, SWFs are expected to serve the purpose of diversification and inter-generational wealth transfer while also acting as a buffer in the face of global financial uncertainty. The absorptive capacity of SWFs allows for the excess wealth supply to be utilised most efficiently. Without such an absorption method, the excess wealth supply can lead to Dutch Disease symptoms such as the appreciation of the domestic currency undermining the competitiveness of sectors other than energy.

The operational governance structure of SWFs is demonstrative in the institutional mandates, whose importance is twofold: it is critical for accountability and essential for allowing an indicative scope for state policies. Mandates define the contribution expected from the fund and clarify the objectives that lie beyond the appropriate scope of the function of the fund. Three essential characteristics associated with SWFs are included in their mandates, reflecting specific traits that offer the core of the conceptual analysis. The three mandates are development, savings, and stabilisation mandates. They can all be included in the mandate, or the focus could be on one. Assessing the mandates helps to understand the distinct operational governance structure in terms of investment techniques and permits an inclusive systematic investigation of the SWFs' performance and an improved conceptualisation of the success of specific, pragmatic investment choices. Braunstein (2014) notes that the contemporary SWFs

address economic and socioeconomic functions, including competitiveness and economic development. Typically, SWFs with a saving mandate tend to acquire equities, in order to diversify their portfolio and future returns while investing in fixed-income instruments to a relatively smaller degree (Santiso, 2008). However, SWFs with development mandates allocate resource wealth to fund domestic socioeconomic projects or invest in supply-chain industries abroad (Santiso, 2008). Malaysia, the United Arab Emirates Mubadala, the French Fonds Stratégique d'Investissement, and Singapore's Temasek are examples of funds with development mandates. Moreover, SWFs are said to further economic interests by acquiring critical assets while achieving and sustaining economic growth (Braunstein, 2014: 174).

On the other hand, SWFs with a stabilisation mandate have a considerably broad role, as the stabilisation mandate must satisfy both fiscal and monetary policies. An SWF can address currency instability as it can act as a domestic buffer against capital supply shocks. Countries that run persistent current account surpluses and accumulate vast amounts of foreign assets can utilise SWFs as a sterilisation mechanism against the negative externalities associated with an inflow of balance of payments on the domestic economy. Furthermore, it is only natural that oil-rich states incorporate stabilisation into their SWF mandates, in order to avoid volatility. Over time, the notion of a stabilisation fund has been articulated through institutions such as SWFs. For example, Britain developed the first stabilisation fund in the 1930s after the depreciation of the Sterling pound against the American dollar (Romer, 2013). The policy choice was later altered, and the British Exchange Equalisation Account was established to control for fluctuations and avoid monetary uncertainty. Stabilisation SWFs work as absorptive capacity vehicles and sterilise excessive resource revenues. Such absorption methods maintain the domestic currency and avoid appreciation that could lead to Dutch Disease symptoms. They also play a significant role in sustaining the competitiveness of the domestic currency, along with accumulating foreign exchange reserves that are vital during periods of oil price volatility. This measure is expected to insulate the domestic economy from fiscal volatility and instability in trade revenues and stabilise the economy by establishing a wide portfolio of domestic and international investments.

Institutional mandates allow us to define the appropriate scope of SWFs and assess whether the funds act according to their mandates, the scope of their investment activities and objectives, and their governance structure. The institutional design of an SWF needs to define clearly its mandate, functions, and objectives as well as its explicit aims and contingent rules.

Fundamentally, how an SWF serves the economic apparatus of the state through foreign investment is directly dependent on its mandate. One could argue that the broader the economic objectives and search for innovative investment platforms, the stronger an SWF's economic leverage internationally. Scholars, such as Alsweilem and Rietveld (2018) believe that innovation in investment methods can only be achieved by appointing technocratic expertise. Financing conduits for portfolios in the international financial market can insulate the domestic economy and contribute to reserve balances while serving as a discrete liquidity buffer. In essence, the mandate can determine the structure of an SWF and its fiscal management functions for addressing the state's macroeconomic needs, avoiding likely fiscal pressures from the volatile nature of commodity prices. The design and structure of SWFs complement the state's macroeconomic objectives, fiscal sustainability, and foreign exchange stability. This is evident in many SWFs that have ventured into new activities beyond simply saving and stabilising vehicles, while the governance structure and objectives have been refined over time. The more an SWF is integrated into the domestic fiscal framework of its home country, the more significant its contribution to the country's economic growth in the long term.

Although the mandates are simplified into three mandates, development, savings and stabilisation, SWFs have demonstrated objectives that extend beyond these three categories, as evident in the literature. Funds are considerably dynamic and can save while also provide for the present. This idea is also presented by Alsweilem and Rietveld (2018, 142), who refer to this form of fund as an 'Investment-Income Fund': the revenue stream provided by the fund 'is stable and predictable and therefore contributes to the management of the volatility of resource revenues'. This is not exclusive to saving funds but can also be present in stabilisation funds – although, to a lesser degree, stabilisation funds tend to be affected by cyclical variations in resource revenues. Alsweilem and Rietveld (2018, 142-143) believe that Investment-Income Funds supplement the government in obtaining a permanent revenue stream for when resources are depleted 'as there are no new resource revenue inflows "feeding" the fund, and it transfers only its real return to the budget'. Despite whether the fund is a Stabilisation Fund or an Investment-Income Fund, the fund's management, investment mandate and asset allocation will reflect its respective functions. Thus, for the Investment-Income Fund to capture the most out of its long-term investment horizon, short-term losses should not be viewed as a problem, but rather the long-term performance should be assessed in terms of actual returns and risk premiums.

Table 4.1: Characteristics of SWFs

<i>Fund type</i>	<i>Asset types</i>	<i>Risk orientation</i>	<i>Transfers to the government</i>	<i>Investment horizon</i>	<i>Asset allocation</i>
<i>Stabilisation Fund</i>	Liquid assets	Low risk orientation	Partially fund government expenditure annually	Short/medium term	Highly liquid assets
<i>Investment-Income Fund</i>	Illiquid assets	High risk orientation	Average long-run returns on investments	Long-term	Complex, diversified portfolio
<i>Savings Fund</i>	Illiquid assets	Medium risk orientation	None (Intergenerational wealth transfer)	Long-term	Diversified portfolio, broad asset classes

The above table provides an overview of the fund types. The need to frame the fund type depends on the current versus future needs of the state, which will reflect its investment model and performance. Stabilisation Funds work as buffers, promoting financial stability; Saving Funds save for a future need, and Investment-Income Funds provide a permanent income stream. Policy choices differ significantly between the funds; while Stabilisation Funds require mechanical methods of investment, Investment-Income Funds have the structural advantage of allocating assets more flexibly.

Of particular interest to this study are the SWFs' investment strategies. Understanding the SWFs' institutional mandates will enable an explicit knowledge of the funds' investment decisions. Whether the mandate focuses on future generation wealth preservation, fiscal revenue stabilisation, or development will influence the variations evident in SWFs' investments. Taking great care during the fund's institutional design to prevent biases and instability due to random and irrelevant investment choices that are not in line with the needs of the economy as a whole. The literature on SWFs has been primarily focused on the latter's investment behaviours in the context of the SWFs' political motives, focusing less on the economic drivers of such investments (Drezner, 2008; Gilson & Milhaupt, 2008). Other issues raised in the literature include security, capturing intellectual property and overinvesting in strategic industries, with SWFs having a tendency to capture the host state's revenue streams that would have been better if owned by the host states domestically. Fernandes (2014, 83-84) notes that SWFs provide political connections to businesses they have invested in. This connection could benefit businesses that wish to expand overseas as SWFs can influence government decisions in favour of the company they invested in, thus, increasing the company's overall performance and valuation. Fernandes' study is valuable on two levels: first,

the study covers 8000 company acquisitions across 58 states and finds statistically significant evidence to suggest that contrary to what has been debated regarding SWFs' political objectives, SWFs' ownership of assets and firms contribute to 'long-term shareholder value'. Also, companies perform better when SWFs invest in them. Second, the study argues that the fear of investments made by SWFs could promote protectionism. This would limit the benefits businesses could potentially gain, such as access to capital and new markets. Similarly, other scholars express the same concerns. Rose (2008) notes that the assumptions that claim that SWFs are driven by political rather than economic motivations dismiss the regulatory, economic, and political factors that mitigate such risk. He argues that vigilance rather than law enforcement is what the US needs when it comes to international investors, further suggesting that the adoption of the Santiago Principles by SWFs clarifies the functions and scope within the fund.

Other scholars, such as Knill, Lee, and Mauck (2012), suggest that political relations affect the choice of SWFs investments but not the size of investments. Their findings suggest that SWFs tend to invest in states with which they have weaker political relations; thus, SWFs do not undertake investment decisions with respect to political relations such as other economic agents and are financially driven. In contrast, Avendano and Santiso's (2009, 7) study issued by the Organization for Economic Cooperation and Development, an institution with excellent knowledge of SWFs, states 'the fear that sovereigns with political motivations use their financial power to secure large stakes in Western companies is shown to be unfounded'. Although, the literature presents a fair number of studies that have been provoked by the increase in the size of SWFs and the possibility of their non-financial motivations. The literature presents stronger support that SWFs' motives are economical, and that the political scepticism associated with the funds as an assumption is very weak (Alhashel, 2015; Avendano & Santiso, 2009; Fernandes, 2014).

The existing nascent literature on SWFs largely focuses on the relationship between portfolio choices and the stock market; this includes market responses to equity acquisition by an SWF as short-term versus long-term reactions (see Chhaochharia & Laeven, 2009; Dewenter, Han, & Malatesta 2010; Kotter & Lel, 2011; Sun & Hesse, 2009). However, authors such as Fernandes (2014) analyse portfolio holdings rather than equity acquisitions and find an overall positive effect on all the subsidiaries. The determinants of SWFs' investments are largely micro-level-based analyses. Only recently have scholars such as Ciarlone and Miceli (2016)

considered SWFs' investment activity from a macro dimension and analysed the cyclical trends of SWFs investment destinations. The variables used in the studies are minimal determinants; for example, Chhaochharia and Laeven (2009) use the inflation rate, GDP per capita, cultural distance variables and market capitalisation. Further, typical variables are sales growth, equity rates, and return on assets, which are the most difficult to obtain. The study's findings suggest that SWFs tend to base their investments in countries that are similar to them culturally, implying a cultural base and further entailing that they invest in the common (Chhaochharia & Laeven, 2009: 32). What is particularly important for oil-rich states, which is an inherent structural feature present in SWFs is the long-term investment horizon that in effect preserves resource wealth for future generations.

Moreover, SWFs work in a way that allows them to narrow the scope of procyclicality in periods of financial crisis. If SWFs were to act otherwise, this would amplify international financial shocks in response to the distribution of wealth that this would cause. This phenomenon is highly problematic and would contribute to the propagation of the crisis not only in the state affected by the crisis but would spread to other economies through global financial markets as a consequence of an inevitable ripple effect. However, scholars such as Raddatz and Schmukler (2012) and Papaioannou et al. (2013) note the procyclical behaviour of funds during the 2008 global financial crisis where there was disinvestment in mutual funds, which involved the withdrawal of wealth from invested funds. Mutual funds, another class of institutional investors based on pools of wealth from public investors, were challenged during the financial crisis, as investors in such funds withdraw assets during periods of financial distress. This phenomenon transmits a shock to the financial market. The former study by Raddatz and Schmukler (2012) suggests that investing in mutual funds could be problematic as they negatively affect states that are in their portfolio by exposing them to foreign financial shocks. During the financial crisis of 2008, financial institutions were faced with liquidity shortages. The crisis was further exacerbated by investor withdrawals leading to the financial meltdown of financial institutions such as Lehman Brothers and Bear Stearns. However, SWFs maintained their positions and asset allocations during the crisis and provided liquidity to the banking system and supported their recapitalisation (Papaioannou et al., 2013: 14). For example, in 2009, the Russian government used US\$22 billion from its SWF the National Wealth Fund to dampen the effects of the financial crisis on the domestic banking sector (Kazakevitch & Trishkina, 2010: 278). As long-term institutional investors, preventing procyclical patterns are essential in light of financial market instabilities.

Papaioannou et al. (2013, 30) identify four challenges brought about by the financial crisis. First, due to the severity of the crisis, the benefits of diversifying asset classes proved ineffective in the face of correlation returns in asset values; second, the contagion to economic growth and assets was not anticipated; third, liquidity risks were most challenging to assess as they are connected to macroeconomic factors; and fourth the severe lack of liquidity increased the depth of loss over the following periods. A financial crisis is a reminder for some funds of the unexpected contagion of the financial system, and this is apparent in the stress test that the New Zealand Superannuation Fund undertakes, ‘testing the ability of the fund to maintain the portfolio under specific macro shocks and considering potential downside risks around specific investment opportunities’ (Papaioannou et al., 2013: 32). Similarly, the Future Fund of Australia maintains a long-term risk management framework by anticipating the risk of substantial capital loss over the medium term (Papaioannou et al., 2013: 32). Other SWFs have learnt valuable lessons from the financial crisis. They have, as a result, implemented changes in fund structures and asset allocations. For example, Norway’s GPFG experienced significant losses during the financial crisis, implementing changes in strategic allocations of equities from 40 to 60%, while enlarging its benchmark portfolio to comprise small capitalisation companies (Papaioannou et al., 2013: 21). Ang, Goetzmann, and Schaefer (2009, 19) argue that Norway’s GPFG could have avoided substantial losses in 2008 had it accounted for key factor exposures pre-crisis and had the asset owner possessed a good knowledge of the potential drawdowns of these factors. They further propose that these factor exposures be incorporated into the fund’s benchmark. The most crucial factors are liquidity, volatility, credit, and size; this approach is similar to the strategies of New Zealand and Australia discussed earlier. Thus, the pre-crisis internal adjustments within the SWFs made the funds more robust in terms of managing through a turbulent period.

A study by Ciarlone and Miceli (2016) starkly contrasts previous studies, stating that SWFs follow countercyclical investments in times of crisis. They use an econometric specification and find that SWFs are attracted to acquiring equity in countries facing a financial crisis. Their results are further validated by their assessment of countries that SWFs invest in and the amount they choose to invest in each country. This behaviour is seen to be ‘contrarian’ to other classes of institutional investors, such as mutual funds. However, SWFs’ dynamic approach makes them apt and unique in their investment techniques. Ciarlone and Miceli (2016) note that increasing fund acquisitions in states hit by financial instability may stabilise the crisis-hit state, thus limiting the effects of the financial shock instead of exacerbating its impact on the global

financial market.

There is a definitive need to move the discourse on SWFs forward by analysing their economic performance while shedding light on how they can contribute to eliminating the negative effects of the resource curse, specifically those related to the political economy of managing resource wealth. As highlighted earlier, the current literature seems to be entrenched in the novelty and motives of SWFs and does not shed sufficient light on the role such financial institutions can play beyond simply being institutional vehicles; but rather as dynamic institutional vehicles responsive to international financial markets in a way that benefits the host country needing the injection of wealth, providing the SWF with the wealth diversification needed. However, analysing their performance will allow for a long-term perspective focusing on the SWF's potential in mitigating resource curse symptoms.

The existence of an institution such as an SWF may enhance economic performance in the state through several channels. One channel is satisfying absorptive capacity, rendering government spending more efficient. Shielding resource wealth from non-productive public spending and involuntary demands allows for the synthesis of coherent investment aims is another channel. Also, a unitary institution makes for productive investment methods and ensures against counterproductive processes. Understanding the performance of SWFs can provide a comprehensive assessment of what it is that increases the fund's performance in the pursuit of sustaining resource wealth and stability in oil-rich states. This offers an innovative perspective in analysing the resource curse theory and provides an improved understanding of SWFs suited to the institutional dynamics within which they operate.

One cannot discuss the resource curse without mentioning the example of the Netherlands and the infamous Dutch Disease, a complex and multifaceted problem that included the fact that resources were not conducive to the existing institutional establishments. Economic challenges lead states to undertake developments that take time to manifest and serve the economy's needs. Thus, although the example of the Netherlands is important, it serves as a lesson more than a consequence of resource wealth. For example, Denmark is idolised for its sound political institutions, as a democratic competent state with a strict rule of law. The discourse speaks of countries such as Libya, Somalia, and Haiti as potential states to follow Denmark's lead (Fukuyama, 2014: 25). However, the complexities within states cannot be deciphered by simply comparing one state to another. The unique challenges that each state faces must be

given due attention. Fukuyama (2014, 25) states, ‘the problem is that we don’t understand how Denmark came to be Denmark and therefore don’t comprehend the complexity and difficulty of political development’; this resonates with the example of the Netherlands. The literature has long treated the case of the Dutch Disease as a faux pas regarding resources and idolises the Norwegian direction in wealth management. The Norwegian model sheds light on important lessons that will be discussed. However, what is crucial is understanding the concept of the countercyclical rule-based framework. When an SWF is integrated into the domestic fiscal framework of its home country, the long-term contribution to the home economy is much greater.

4.2. The Countercyclical Rule-Based Framework

The most important contribution of SWFs in resource-rich states lies in improving stability and separating resource wealth management. Thus, SWFs can contribute to improved economic performance if embedded in a countercyclical rule-based framework. When this dynamic is followed, procyclical fiscal policy is diminished. The IMF has advocated for the integration of wealth management into fiscal policy by suggesting that fiscal framework ‘should provide adequate precautionary buffers in countries that are vulnerable to high volatility and uncertainty of resource revenues; and could be supported by resource funds if they are properly integrated with the budget and the fiscal policy anchor’ (Baunsgaard, Villafuerte, Poplawski-Ribeiro, & Richmond, 2012: 3). Further, to achieve stability Alsweilem and Rietveld (2018, 143) argue that ‘the consumption of resource revenues needs to be constrained in boom periods, as this is what allows a steady level of spending in bust periods’. Contingent fiscal rules direct savings and the spending of resource wealth and differentiate between the form and function of an SWF. For example, Qatar’s SWF receives a fixed percentage of resource revenue and is not influenced by cyclical oil prices. The advantage of saving a fixed percentage is that the fund is independent and insusceptible to domestic trends that could affect its function. In effect, the savings and spending methods will respond and reflect volatility as the percentage increases or decreases according to the business cycle. Although, scholars such as Alsweilem and Rietveld (2018) argue that the unresponsive behaviour of funds that function on fixed annual transfers to the cyclical nature of the economy or resource prices is considered a disadvantage as governments are still needed to transfer even if the revenues are limited. Cyclically adjusted rules are desirable as they separate government expenditure from cyclical volatility. This

method provides SWFs with a contingent role in managing resource wealth for an unknown future.

However, resource wealth is a function of exogenous factors, including and not limited to resource price, production levels and taxes. If the wealth transferred to an SWF is affected by the dynamic setting of oil and the boom-bust cycle in resource wealth, then the fund's functionality will continually be disturbed. Further, this would defeat the fund's purpose as an independent institution shielded to a certain degree from domestic economic volatility. Operational independence allows SWFs to function as income-generating vehicles. It is because of the institutional arrangement of SWFs that their contribution to resource curse theory can be demonstrated. The volatility of oil prices is not reflected in the transfers made to the SWF by fixed annual transfers and, thus this reflects contingent fiscal rules that are grounded and not adjusted to cyclical trends.

4.2.1. Approaches to Integrate SWF Into Fiscal Framework

The state's economic development level, infrastructural demands, institutional arrangements, and ability to absorb wealth are essential factors that determine the SWF's integration into the fiscal framework. In fact, in a report, the IMF suggests that the design of an integrated fiscal framework is highly dependent on 'country-specific economic and institutional circumstances, such as resource revenue dependency, reserve horizon, and development needs' (Baunsgaard et al., 2012). The report further provides, in practice, conceptual approaches to fiscal policy, which are as follows:

The Permanent Income Hypothesis approach holds that the annual spending and saving of resource wealth depend on resource wealth. If this approach is integrated into the fiscal framework, the non-resource deficit would be financed in the least amount of time. An example of this approach is Norway which will be discussed; the fiscal spending policy allows a 4% transfer of investment revenue to finance the non-oil budget. This approach tackles the problem of absorptive constraints as wealth in the SWF defines consumption.

The Modified Permanent Income Hypothesis approach: The IMF has been criticised for being too rigid with the Permanent Income Hypothesis approach as its relevance is limited to low-

income resource-rich states mainly due to its limitations in addressing capital and credit constraints. The modified approach no longer views resource wealth as simply extracted wealth, but resources in the ground are included in the resource wealth conception. This perspective translates into the approach undertaken to finance the non-oil deficit, where finance allocation is made with anticipated forecasts of resource revenue. This method is significantly more flexible than the Permanent Income Hypothesis approach; however, it could prove problematic given the volatility of commodity prices and the assumptions made regarding resource wealth.

The Resource price-based and Structural balance approach works by smoothing resource wealth through a fiscal framework that separates spending from cyclical fluctuations. This approach works with resource price fluctuations by adjusting spending and saving in accordance with resource revenue. However, the limitations of this approach are that it dismisses changes in overall resource capacity and fiscal policy. The IMF gives the example of Chile's fiscal framework that adopts a structural balance rule where the non-mineral revenue is adjusted to resource revenue swings.

The Non-Resource Current Balance Rule holds that resource wealth and capital expenditure be excluded from the fiscal balance. This approach views the investment of resource revenues in 'physical assets with high yields in terms of non-resource productivity and growth' as beneficial to the growth of a developing state with limited capital (Baunsgaard et al., 2012:16). This approach is more theoretical than practical, as it does not ensure abiding by fiscal policy. Separating capital expenditure would mean that education and health are delinked from fiscal targets, which reflects a restriction in growth-enhancing expenditure. An appropriate method is to integrate a fiscal framework that combines both capital and expenditure. Baunsgaard et al. (2012, 17) highlighted that the delinking of capital expenditure 'could lead to de facto parallel budgets...provide strong incentives to camouflage recurrent expenditures as capital spending or to choose projects even if they may not produce strong benefits'. This would ultimately lead to a fiscal balance subject to volatility and procyclicality.

After discussing the countercyclical fiscal framework and the four different approaches to integrating the SWF into the fiscal framework, it is important to stress that no specific method exists that is considered the 'correct' way. However, integrating the SWF into the fiscal framework can avoid issues of procyclicality. The focus should shift from portraying SWFs as

a specific rigid model to follow, to viewing it as a fluid institutional structure that can be adapted to the needs of the state. Nonetheless, there are basics that make a fund an SWF. However, the discourse should shift from questioning the importance of the availability of data because even if the data is available for funds, its accuracy is questionable. The focus should be on the objectives, governance and rule-based fiscal framework and the fund's position and role during challenging times that ultimately test the SWF's capability to adjust to cater to the changing circumstances.

Similar to how the countercyclical rule-based framework provides SWFs with a contingent role in managing resource wealth through fiscal policy integration. The following section analyses the Norwegian model and sheds light on the crucial characteristics that make the Norwegian model such a coveted model for wealth management. One cannot discuss SWFs without bringing up the example of Norway; the literature on the Norwegian SWF is one of the most extensive. Overnight, Norway became a hydrocarbon exporter, and today it is the seventh-largest net exporter of oil and the fourth-largest net exporter of natural gas. Yet, Norway has demonstrated a productive oil sector spawned by efficiency in oil services and wealth management. These claims fall short of the resource curse that beset oil-rich states lacking efficiency and negative economic growth. Norway has engineered a resource blessing; thus, including the Norwegian model in the discourses focusing on investment procedures and management is crucial. An overview of the Norwegian model helps shed light on the dynamics at work within the model and lessons that could be learnt from it, particularly concerning its investment decision-making.

4.3. The Norwegian Model as a Blueprint

The literature has long portrayed the so-called ‘Norwegian model’ as the ideal model for oil-rich states to adopt. The model has been referenced as the most successful in terms of natural resource management. The administrative design of the ‘Norwegian model’ would consequently lead to improved performance and transparency in resource wealth management (Al-Kasim, 2006; Collins, 2003). The model has served as a means for dynamic change and good governance; however, it is crucial to highlight a few aspects of the model to understand how this model has been coveted. The Norwegians established policies and separated the administration of energy development from government functionalities as early as 1972.

Establishing a national oil company responsible for export activities has given Norway the canonical model associated with good governance in relation to the resource sector (Thurber, Hults, & Heller, 2011). The Norwegian Model is an administrative design based on separating government functions and oil production – to include the separation of commercial activities, regulatory responsibilities, and policymaking. The Norwegian administrative system assigns three institutional bodies with distinct resource wealth management duties: first, the Norwegian National Oil Company Statoil, considered as the commercial body; second, the Ministry of Petroleum and Energy regarded as the energy policymaking body; and third, the Norwegian Petroleum Directorate, which is the regulatory and administrative body. The administrated distinct roles played by each body encapsulate the Norwegian Model. Establishing such a model has inspired and promoted them as the ideal template for efficiency and success.

Oil-rich countries have administrated their oil production using different approaches, and the variations are substantial. For example, Latin American countries such as Brazil and Colombia had a National Oil Company that performed all the functions (i.e., commercial, policy and regulatory) but tapped into appointing independent agencies to undertake regulatory functions. In 1997 Brazil launched radical sector reforms that included the establishment of an autonomous agency to regulate oil production, and soon after, in 2003, Colombia followed. The successful performance of Brazil and Colombia’s natural resource sectors can be attributed to such reforms, as separating the administration and regulation of natural resource agencies had a salutary effect, in the case of Colombia’s Ecopetrol and Brazil’s Petrobras, their natural resource production companies could focus exclusively on the commercial operations of their oil companies, respectively (Balza, Espinasa, & Mori, 2014: 370).

Other oil-rich states, such as Nigeria, lack a clear administrative design of the roles and responsibilities in the management and function of oil. However, they have attempted to employ an autonomous body to undertake policy and regulation but have been unable to retain the efforts through the effective separation of functions. In contrast, states such as Russia, Saudi Arabia and Venezuela have made no such attempts, and the states' National Oil Companies play a pivotal role in the functionalities of the oil sector. Scholars such as Thurber, Hults, and Heller (2011: 5366) argue that the separation of government functionalities and oil production is not a necessity for the success of the oil sector and its development, nevertheless highlighting that in countries where the separation of functions is successful, they are characterised by 'high institutional capacity and robust political competition'. Since every oil-rich state's political and economic foundations vary significantly, where institutional capacity is lacking, other configurations would be ideal, such as consolidating the commercial policies and regulatory functions (Thurber, Hults, & Heller, 2011).

Although the separation of government functions has long been treated as a *sine qua non* to the success of resource-led growth, two variables are crucial to the replication of such a model: political dynamics and institutional characteristics. The separation of state institutions, specifically those related to windfall wealth management, is the first lesson oil-rich states can draw from the Norwegian model. Norway's Ministry of Petroleum and Energy is an example of the separation of the institutional functions of the state. However, the issues of whether the Norwegian model is a prerequisite to a well-functioning oil sector, how well other oil-rich states can extrapolate from the Norwegian model, identifying lessons that can be drawn from the model and how they can help to understand and assess the performance of oil-rich states must be addressed.

Norway's GPFG was established in 1990 as the Petroleum Fund to manage the country's resource wealth. The fund was considered one of the small SWFs; twenty-one years later, the fund was ranked as the largest SWF in the world (Barbary & Bortolotti, 2011). Norway's GPFG has assets amounting to US\$1,259 billion, nearly triple the size of Norway's GDP. Size aside, the fund is known for its best practice. It functions as a dynamic fiscal policy tool while limiting government spending by allocating hydrocarbon revenues into the fund and using its expenditure to finance the non-oil budget deficit (Velculescu, 2008). Thus, GPFG has become an exemplar to SWFs worldwide in this relatively short period.

The fund’s reputation speaks for itself, achieving the highest ranking from Truman’s scoreboard with 98 out of 100 among a group of sixty SWFs (Stone & Truman, 2016). The Truman scoreboard examines the performance of SWFs and ranks them according to structure, governance, behaviour, accountability, and transparency. The high score that Norway has achieved on the scoreboard can be attributed to the high level of transparency. Many funds score low simply because disclosure is not publicly available. The points deducted from Norway are for the lack of clear policy prescriptions on leverage (Stone & Truman, 2016: 14). In fact, the motivation behind the establishment of the scoreboard was to assess the transparency and accountability of the SWFs, which according to Stone and Truman (2016) are the principal factors of good governance. Transparency and accountability are seen as essential tools to assess the risk and stability of the funds on the global financial market. Although Norway ranks the highest on the scoreboard, the motivation behind the scoreboard is not to score 100 but rather to provide a benchmark of where each SWF is in relation to the other and whether the scores improve or deteriorate over the years.

Another form of measurement is the Resource Governance Index, which assesses how resource-rich countries govern their resource wealth. The index composite score constitutes three components that are shown in Table 4.2: value realisation and revenue management, measure the characteristics of the extractive-led sector. In contrast, the enabling environment component captures the broader governance setting.

Table 4.2: Norway’s Resource Governance Index and Component Scores

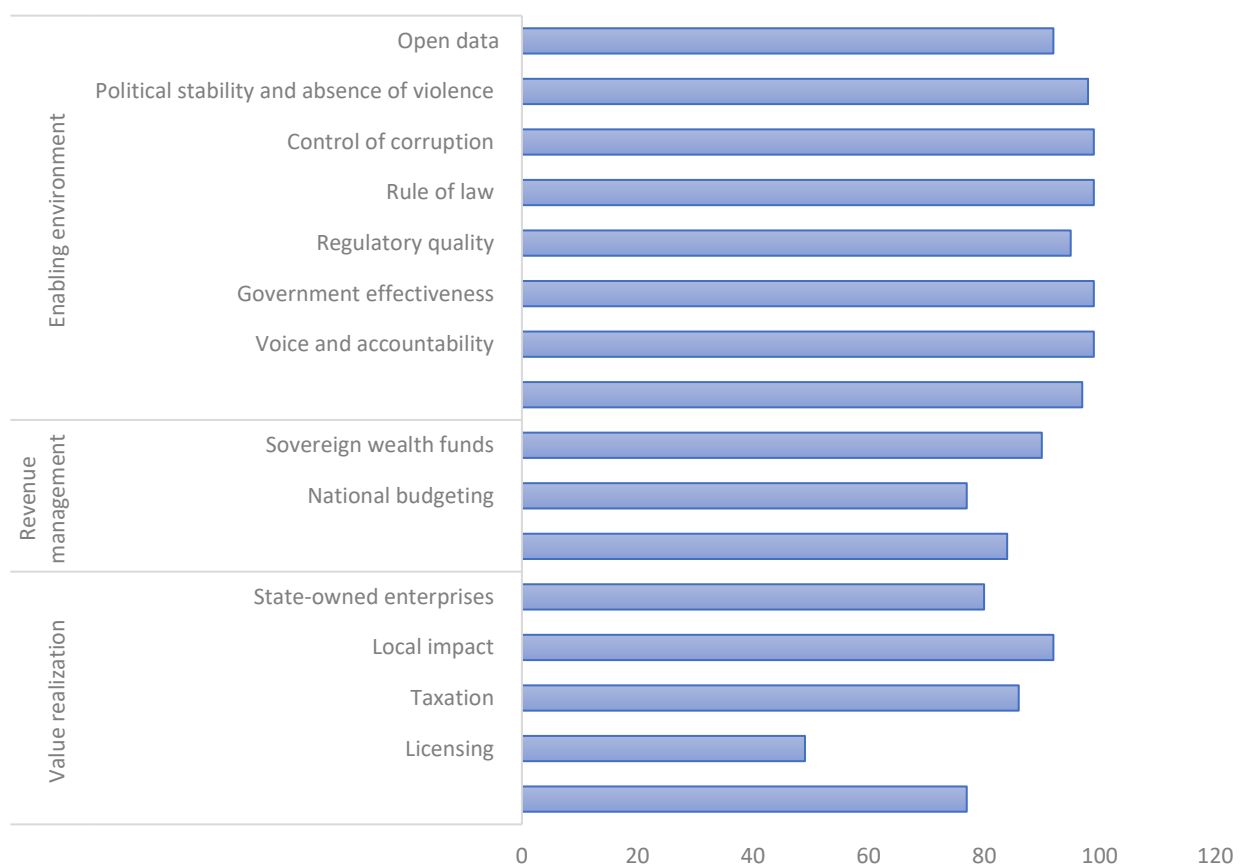
<i>Resource Governance Index</i>	86/100
<i>Value realisation</i>	77/100
<i>Revenue management</i>	84/100
<i>Enabling environment</i>	97/100

Source: Natural Resource Governance Institute (2017)

The three components are overarching in measuring the scope of governance. This index assesses resource governance differently as it incorporates SWFs into the revenue management component score and does not simply assess SWFs. Norway’s oil and gas sector scores 86 out of 100 points and ranks first in the 2017 Resource Governance Index. Its performance was driven mainly by the high score of 97 in the enabling environment component, as demonstrated in the table above.

Norway scores 77 out of 100 points in value realisation, where the index scores the highest in the local impact category – scoring 92 points. The robust legal requirements demonstrate the exceptionally high scores under the enabling environment component, which encompasses government effectiveness, accountability, and the rule of law, amongst other components (full list in Figure 4.1). Norway’s weak performance in the licensing component of value realisation refers to licensing projects and is an outlier compared to the other components. According to the Natural Resource Governance Institute (2017), the low scores for transparency of financial interests and contract disclosures drove the score down, where Norway ranks below the United States and the United Kingdom. Although this index differs tremendously from the Truman scoreboard as it assesses governance, the points that were deducted for Norway in the Truman scoreboard were also due to disclosure.

Figure 4.1: Norway’s Resource Governance Index Subcomponent Score



Source: Natural Resource Governance Institute (2017)

The revenue management component in the Resource Governance Index includes the assessment of SWFs. In this subcomponent, Norway scores 90 out of 100 and ranks fifth in the index. This may be the only index that does not rate the Norwegian SWF as the top-ranking

fund. In deconstructing the different indicators, the subcomponent ‘Sovereign Wealth Funds’, found under revenue management in Figure 4.1, one can distinguish the weaknesses this index identifies. There are seven indicators – SWF deposit and withdrawal rules, SWF deposit and withdrawal practice, SWF investment rules, SWF investment practice, SWF financial reporting rules, and SWF financial reporting practice. From these seven, Norway attains full scores, except on two subcomponents – SWF deposit and withdrawal rules, where it scores 67 and SWF deposit and withdrawal practice with a score of 75. This index, therefore, identifies that GPFG is not clear in its deposit and withdrawal rules and practices, although the index does not explain where Norway falls short in these indicators. An attempt to postulate the questionnaire that the index used to produce the figures shows that the criteria where Norway falls short are in the rules governing the size of withdrawals from the fund, the rules governing the withdrawals and spending from the SWF, their requirement to pass through the national budget and the numeric rules governing the size of deposits. These former elements deal with the deposit and withdrawal rules, and another four elements cater to the deposit and withdrawal practice, namely the publicly available fund size in an annual financial report, disclosure of withdrawals and deposits, and the adherence to the rules established regarding withdrawals and deposits. Although this index sees a weakness in the rules and practices of withdrawals and deposits, it is safe to say that Norway has a unique and clear procedure. However, because this index was based on a questionnaire, quantifying such matters may have been difficult or in fact missed. An in-depth explanation of the withdrawal and spending procedure will be discussed.

The GPFG’s success on a global level has been rough and has involved turmoil. Assessing the institutional dynamics that occurred is essential in order to understand the state’s role in constructing policy fit for the economy’s needs. During the 2008 financial crisis, the GPFG experienced significant losses, and the fund contracted to one-quarter of its pre-crisis size. Although this did not affect the legitimacy of the fund, it led to debates on the fund’s management (Ang, 2010: 4). Although the GPFG was established in 1990, wealth from the state budget was transferred to the fund in 1996 after the state budget had tackled its deficit. The amount transferred to the fund is determined by an annual budget allocation designed by The Ministry of Finance and Norges Bank Investment Management (NBIM). The invested oil revenues permit a withdrawal, estimated as the SWFs’ long-run real return at 4%. This is a fiscal spending policy run on the basis of allowing a 4% transfer of investment revenue to the state budget. The annual budget is designed under the assumption of null resource wealth. The non-oil budget can only run a deficit of 4%, which is equal to the transfer from the GPFG.

Thus, the SWF's revenue transfers are what funds the non-oil structural deficit: the larger the transfer, the larger the deficit allowance. The SWF instils discipline into government spending habits by inflicting commitment to the 4% rule. The most remarkable aspect of the Norwegian model is the significant amount of oil revenues that are flooded into the GPF (Alsweilem & Rietveld, 2018).

4.3.1. Norway's Investment Strategies

Initially, the fund's investment strategy was limited to investments in government bonds. However, thereafter innovations to the investment strategy were introduced, allocating 60% to stocks and 40% to bonds. This introduced new asset classes to the portfolio mix and provided an efficient, balanced market portfolio. Thus, Norway began with a bond-heavy portfolio and progressively increased equity allocation (Alsweilem & Rietveld, 2018). The fund increased its share of equities from 40 to 60% during the 2008 global financial crisis. This decision did not prove fruitful initially; 2008 was the worst year for the GPF; the fund lost 23.3% of its total value. However, the following year marked the return of 25.6% of the fund's value. The fund's success in 2009 was partly due to increased share acquisitions (Fouche, 2018). In hindsight, the change in the fund's investment strategy was successful, primarily because SWFs aim to generate wealth for future generations. Following the direction that GPF took in changing its asset allocation in 2008, it has not yet adjusted its asset allocation to the market's needs, for example, by dismissing investments in emerging markets and small capital businesses. Incorporating such investments into their investment mix would show the fund's adaptability and responsiveness to the changing market trends.

An underappreciated aspect of the Norwegian model is that savings and spending fiscal rules are not strictly fixed, but somewhat fluid. The savings and spending are achieved through a consensus with the overall aim of efficiently allocating resource wealth. Such rules are consented to by three main institutional actors: The Ministry of Finance, NBIM, the central bank executive board and the Parliament. Their explicit objectives are 'to strengthen both the legitimacy and foundation of the Fund's long-term investment strategy; to advise on how to develop the strategy further; and to facilitate transparency and debate on important decisions regarding the investment strategy for the Fund' (Chambers, Dimson, & Ilmanen, 2012: 69). These institutions are the most critical influencers that form the policy dynamics within the

Norwegian model, the distribution of their primary responsibilities concerning the GPFG is as follows:

- The Ministry of Finance is responsible for the SWF's long-term strategic investment orientation and asset allocation. The ministry assigns operational management and has discretionary authority over the strategy and selection of appointed directors.
- The central bank's executive board is the main authority responsible for the operational management functionality of the fund. It dictates the strategic plan for NBIM to undertake. The board comprises eight members subject to an internal audit and independent of the central bank's activities.
- The NBIM is the operational manager of the fund. It is a unit within the central bank responsible for the SWF's asset management. Investment strategies are implemented based on research that seeks the most efficient forms of asset allocation.

Further, the Ministry of Finance is responsible for the investment implementation and operation, namely, its strategic asset allocation, which includes the selection of investments that fall under the ethical investment mandate criteria. The GPFG does not invest in the tobacco industry, arms industry, companies deemed guilty of human rights violations and environmentally harmful companies. Undertaking ethical responsibility when investing confers legitimacy to the GPFG as suggested by its investment strategy (Ang, 2010: 23). It can be understood that it is due to such attention to detail that the Norwegian governance structure has been portrayed as exemplary in the literature (see Ang, 2010; Das, Lu, Mulder, & Sy, 2009; Frankel, 2012; Monk, 2009).

Examining institutional quality is critical to appreciate and understand the quality of institutions put in place and to delineate the explanatory scope of the resource curse theory. A state's experience is not constant; institutional origins and changes vary according to the international and domestic actors' interaction in the wider economy. Studying resource-rich states in the same way and setting the same variables and identical frameworks to evaluate them is indefensible. Using a methodology grounded on substantive differences and trajectories within systematic conjunctures and disaggregating variables, and analysing redistributive streams allows for an encompassing evaluation of resource-rich states.

4.3.2. The Norwegian Model Deconstructed

There are essential requirements necessary for the Norwegian model to hold. The prerequisites can be summarised into three aspects: alignment between the resource base and state objectives, an enabling market setting and a well-developed financial and technological institutional system that is the base for wealth management (Al-Kasim, 2006). Norway is a unique case; many of the institutional policies they have adopted over the years have been uniquely Norwegian. This is related to the existing state apparatus, culture, and predisposed institutional foundations. Although Norway lacked expertise at the outset of the hydrocarbon discovery, its level of economic development prior to the discovery of oil, along with the quality of infrastructure and its diversified fiscal revenue sources, are all features that are not commonly present in resource-rich states. Norway was a democratic state with a competent and established bureaucracy, high institutional quality and a long tradition of intra-governmental checks and balances. A capable bureaucracy, for instance, can provide the regulatory and policy checks needed for Norway's Statoil, which is fundamentally at the core functioning of the Norwegian model.

When institutions are strong and capable, multiple checks and balances ensure that the functioning of each institutional body is appropriately achieved. Norway's institutions were strong and capable before the discovery of oil. They played a vital role in the dynamics of institutional development and administrative adjustments that occurred after the discovery of oil, which is more challenging for countries that lack such institutional endowments. Therefore, scholars such as Al-Kasim (2006) argue that oil-rich states can refer to the Norwegian model, but it should not be fully copied without considering the state's condition. The best approach would be to incorporate relevant features from the model based on a case-to-case study of the fund. Notably, separating the crucial institutional bodies related to the oil resources and their revenues is an essential aspect of the 'Norwegian Model' (Al-Kasim, 2006). An opposing strand of literature notes that government strategies are highly dependent on the state's institutional structure and capacities, thus what works well for a state with developed institutions may not be suitable for other states' institutions (Grindle, 2007; Moore & Putzel, 2000; Rodrik, 2008). Therefore, although the Norwegian model is seen as a model of best practice, replicating institutional dynamics must be done carefully.

Many scholars have highlighted the advantages of separating roles and responsibilities related to oil wealth management (see Al-Kasim, 2006; Lahn et al., 2007). Alsweilem and Rietveld (2018, 204) note that the separation of institutional bodies responsible for the investment implementation of resource wealth management, such as the Ministry of Finance in Norway, ensures that the ‘concerns about potentially damaging political intervention in the investments of the sovereign wealth fund are reduced by the full transparency of the ministry’s policy choices’. Other scholars, such as Boscheck (2007), highlight that the absence of such clear policy regulations relating to the distribution of wealth is highly problematic – as is the case in countries such as Nigeria. His study uses an institutional economics framework to analyse the administration of oil; he suggests that private agency methods of oil administration to national oil companies are feasible methods subject to the context of the state. Sala-i-Martin and Subramanian (2003) dissent from the same belief advocating that oil windfalls should be transferred to a private independent agency rather than be under the control of the public sector.

Separating state institutions has worked in Norway due to several observations. First, separating state institutions from the oil sector allows for an increased focus on commercial returns and enhanced operational performance (Al-Kasim, 2006). Second, states can improve economic performance through specific aims and benchmarks by creating autonomous institutions to handle resource wealth. Thurber and Istad (2010) note that this was made possible by Norway’s policy orientation, which focused on limiting possible negative ramifications associated with oil revenues through systematic efforts that stirred the public discourse from simply focusing on revenue but developing new checks and balances to cater to the new source of wealth. Third, the separation of the oil sector in Norway demonstrates that the conflict of interest politically and the possibility for rent-seeking activities, which oil-rich states are susceptible to, is minimised (Al-Kasim, 2006; Thurber & Istad, 2010). The interaction between Norway’s government and the oil sector is significant as it is built on consensus. If this synergy can be imitated, developmental needs and policy recommendations are made efficient and relevant to the needs of the economy.

4.3.3. A Blueprint for SWFs or Uniquely Norwegian?

How well the Norwegian experience will extrapolate to states with an SWF is worth investigating. The Norwegian experience can offer the analysis with a working model. The ‘best-practice’ notion suggests that specific institutional settings must be in place for the model to succeed (Rodrik, 2008). Further, Rodrik (2000, 5-7) states, ‘a strategy of institution building must not over-emphasise best-practice "blueprints" at the expense of local experimentation... desirable institutional arrangements vary... not only across countries but also within countries over time’, His study highlights the non-contextual nature of best practices and how limiting the general idea can be. Understanding a country’s trajectory and context should shift the focus from imitating institutional formations. Instead, emphasis should be placed on institutional functionalities to allow for Rodrik’s notions of variation and customised experimentation. Similarly, other scholars note that policymakers in oil-rich states must assess whether the Norwegian model fits the country based on a context-specific analysis (Thurber, Hults, & Heller, 2011: 5376).

In the same way, Norway has blossomed from a once frugal mid-income Scandinavian democracy into one of the more prosperous countries praised for its SWF. By examining the trajectory of Norway and what ultimately led to the establishment of the GPF, it is evident that the model was not planned but rather constructed correctly. A study by Tranøy’s (2010), ‘Norway: The Accidental Role Model’, highlights how Norway integrates oil revenues into an established institutional dynamic. Well-established institutions welcome the establishment of institutions such as SWFs. Tranøy (2010) highlights the establishment of Norway’s SWF as a means of flexible adjustment and a tool to address the externalities associated with oil price volatility and thus in effect supports Norway’s welfare model.

Al-Kasim, the director of resource management for the Norwegian Petroleum Directorate, has been one of the least credited individuals when it comes to analysing the trajectory of the Norwegian model. In fact, the first time the Financial Times wrote an article about Al-Kasim was surprisingly due to a remark by a Norwegian development official. The remark brought to attention how, ironically, the Norwegian government was creating a programme to aid oil-rich states in managing their natural resources when it was, in fact, someone from Iraq, Farouk Al-Kasim, who contributed substantially to the creation of the Norwegian Petroleum Directorate and the national oil company, Statoil. It stated that ‘without him we would just have let the

American oil companies decide how to do things' (Sandbu, 2009). A former Statoil manager states that Al-Kasim 'is perhaps the greatest value creator Norway has had' (Sandbu, 2009). Al-Kasim was previously an executive at the Iraqi Petroleum Company. His expertise was invaluable to the preparations Norway needed to become an oil state.

The establishment of a new regulatory framework and policies to cater to the discovery of petroleum in Norway were the main contributions of Al-Kasim. The state's blueprint was written by Al-Kasim who drafted the government's white paper and consequently led the establishment of the Norwegian Petroleum Directorate, an oil industry regulator and Statoil, the national oil company (Sandbu, 2009). The Norwegian Petroleum Directorate refereed oil projects and ensured they served the state's best interest in creating jobs, generating profits, and minimising environmental impacts. Statoil developed local expertise and provided employment opportunities. Moreover, Al-Kasim advised the Norwegian government to reinvest the resource wealth to benefit the future Norwegian generation (Benghida, 2017).

Macroeconomic conditions are often the drivers of the establishment of SWFs: this includes prolonged current account surpluses from windfall rents. As such, SWFs address macroeconomic conditions and are modified and calibrated accordingly. The mandate of the Norwegian SWF – Norway's Government Pension Fund has experienced change since the establishment of the fund in 1990. The role of the SWF changed to address the needs of the economy; cushioning the Norwegian economy against oil price volatility was removed from the mandate. The Norwegian SWF serves one purpose now – saving for the benefit of the future generations (Chambers, Dimson, & Ilmanen, 2012). The fund's initial asset allocation was limited to government bonds. It was modified in 1998 to allow a 40% allocation to equities, and this was gradually increased to 60%, along with ethical guidelines and investments that the fund excluded itself from (Chambers, Dimson, & Ilmanen, 2012).

Other oil-rich states could use SWF as a fiscal policy tool and manage policies sustainably in the long run. The fund's expenditure consists of an allocation of 4% of the fund's total assets, which is an estimate for the long-run real rate of return, into the fiscal budget to finance the non-oil government deficit (Velculescu, 2008). The investment strategy is specific to investing exclusively abroad to ensure diversification and a stable flow of rents. However, shielding the non-oil economy from oil volatility can lead to exchange rate appreciation and Dutch Disease symptoms. An annual budget is devised under the hypothesis of no oil wealth *ceteris paribus*,

where the non-oil budget is permitted to run a 4% deficit, which equals the transfer received annually from the SWF to ensure the feasibility of the fiscal framework (Alsweilem & Rietveld, 2018).

Furthermore, the Norwegian fund invests on average in 0.6% of shares with a maximum threshold of 5%, making them high-return moderate-risk investors. As discussed earlier, the fund's portfolio follows a strategy of 60% equity and 40% fixed income. According to Velculescu (2008), introducing real estate into their basket of investments improved their risk-return trade-off. Additionally, Norway's fund follows an investment strategy based on purchasing assets in markets where values are dropping, in order to rebalance its asset portfolios while also injecting the market with liquidity and acting as a stabilising influence (Velculescu, 2008).

The institutional endowments that can be extrapolated from the Norwegian model are as follows:

- With the establishment of an SWF, government revenue goals and performance are made stable, efficient, and resilient with the separation of responsibilities across stakeholders and public institutions.
- Institutional arrangements are highly consultative and undergo a representative process.
- The fund functions as a fiscal policy tool that limits government spending by absorbing wealth.
- Investments are made exclusively abroad.

4.4. The Blessings of Oil Rents

Norway is a shining example of a state that has created a professional money management culture either within central banks or public sector organisations. Norway has been successful because it has anchored its fund in an array of policy measures designed to produce development for the country under prudent financial management and other macroeconomic policies. Norway's strong state regulation benefits the private sector, in fact, 'Norway is the only country in the world where the state and the capitalistic entities work together as partners' (Sandbu, 2009). The aim of the Norwegian model was to preserve the private sector's competition by instilling an independent institution to regulate the state oil company and the private sector.

Efficiency is achieved through rational investment methods in accordance with endowments. Thus, the question of why states took the diverse forms that they did arises. SWFs can be used as a tool to counteract resource curse symptoms through their emphasis on choice and efficiency. Institutions do not simply initiate from a vacuum but displace or develop existing ones. This formulation is intuitively appealing: it exemplifies a period of economic growth from a period of economic sensitivity and erects a conceptual framework that focuses on resources being a curse. This conceptual framework, however, forecloses the benefits of development and growth associated with resources; this is why engaging SWFs in the discourse responds to the economic and institutional causes of the resource curse.

In transitioning from a pre-dated economic system to a modern, sophisticated system, state institutions are redefined, and new notions are constructed. The emergence of SWFs is no new phenomenon. However, wealth distribution and management junctures evolve through institutional innovation and the communication revolution. Oil-rich states give new meaning to the rentier state model, as oil revenues enable governments to increase state spending while also providing the population with entitlements. Western companies began exploring oil in the Middle East in the 1930s. Within four decades, some of the region's small oil producers have been able to achieve the highest GDP per capita in the world, allowing them to play an active role in the global economy – especially at critical junctures such as the 2008 global financial crisis, where their wealth proved instrumental to the balance sheets of distressed financial and real estate sectors (Financial Times, 2008). Oil was the resource that transformed the Middle Eastern states from isolated economies to active participants in the global economy.

The following analysis focuses on Qatar as a commodity-based case study and Singapore as a non-commodity-based case study. The following chapter situates the case studies in a broader context to gain insight into the role and functionality of their respective SWFs. The analysis includes a broad range of macroeconomic and structural characteristics. First, this provides a richer analysis of SWFs' investment performance by resorting to the results of the literature on equity allocation. It allows the study to test the significance of a richer set of macroeconomic and institutional variables. The model does not impose any a priori assumptions between the SWFs' investments and a set of previously defined variables but showcases which variables are significant through qualitative investigation.

Two reasons that make Qatar particularly interesting to analyse as a resource-rich state. The first revolves around Qatar's large notable investments worldwide, and the second revolves around small economies' economic and development constraints. The change and development that Qatar has undergone in the last two decades are drastic. It has emerged as one of the better-known Gulf states internationally, in part due to its oil production and immense natural gas reserves but also because of its investments worldwide. Similarly, what makes Singapore another ideal case study alongside Qatar is the similarities between the two states, despite the differences in their origins of wealth generation. Qatar and Singapore are both small open economies with similar macroeconomic, geographic, and economic features. Small open economies have the largest SWFs but are also more susceptible to global price fluctuations, making wealth management of critical significance to them. Relevant elements of Singapore's SWFs in relation to the main case study Qatar will be discussed. The following chapter introduces the case study of Qatar, where a brief overview of the country's economic position and performance is presented in order to fully contextualise the subsequent discussion on its SWF. In the case of Qatar, the country's economic position in relation to hydrocarbon wealth is discussed, along with the economic challenges that the country has faced over the past couple of years. An evaluation of Qatar's SWF follows this, and elements of the Singaporean SWF are analysed with particular attention to their investment strategies and asset allocations.

5. The Case Study of Qatar

The last two decades have been revolutionary for Qatar. A small state in the Middle East that pitched far above its size politically, economically, and diplomatically was tested tremendously. The state has come a long way; this includes considerable gains in human capital and educational quality, advanced infrastructure, an award-winning airline, and a political regime seemingly committed to diplomacy. Nevertheless, the state faces a challenge in preserving wealth for future generations and diversifying its economy to encompass more than just wealth from resource riches.

Qatar, the world's largest Liquefied Natural Gas (LNG) exporter, produces 18.5 billion standard cubic feet per day and has a production capacity of 77 million tonnes per annum, according to data from Qatar Gas (2020), the world's largest LNG company directing energy operations. Qatar is also one of the top oil exporters globally, producing 1.4 million barrels per day, according to the British Petroleum Statistical Review of World Energy (2020), ranking thirteenth globally. It is one of the most important producers of gas-to-liquids in the world. The extractive-led growth has been and will continue to be, a significant stimulus for economic growth in Qatar.

Table 5.1: Qatar Public Budget for 2015–2020

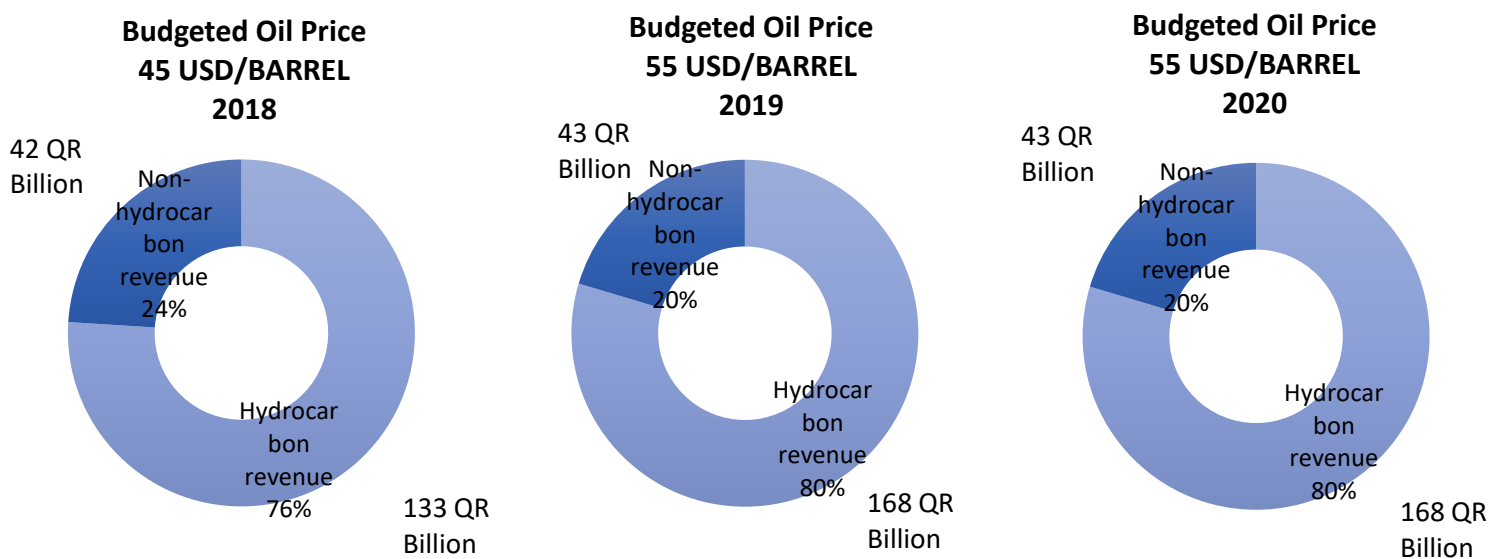
<i>Budget (QR billion)</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>
<i>Total Revenue</i>	187.2	170	163.3	207.9	214.7	211
<i>Oil & Gas</i>	153.3	140.7	133	173.1	170	168
<i>Other Revenues</i>	33.9	30.1	30.3	34.8	44.7	43
<i>Total Expenditure</i>	191.4	221.7	203.3	192.8	208.4	210.5
<i>Minor Capital Expenditures</i>	30.9	3.9	3.9	3.8	4.1	3.5
<i>Salaries and Wages</i>	37	59.2	53.1	55.7	61.4	59
<i>Major Projects</i>	49.7	98.7	86.1	77.8	80.2	90
<i>Other Current Expenditure</i>	73.8	59.8	60.2	55.5	62.7	58
<i>Balance Surplus/Deficit</i>	-4.2	-50.8	-40	15.1	6.3	0.5

Source: Ministry of Finance of the State of Qatar (2020b)

Oil and gas represent a substantial share of economic activity and fiscal revenues. Table 5.1 demonstrates the substantial share of the revenue from oil and gas. Although oil and gas revenues have fallen slightly from 2019 to 2020, expenditure has increased by 1.9% compared to 2019. In fact, budgeted expenditure is the highest compared to the past four fiscal years. This reflects the country's commitment to the completion of various development projects that

contribute to the sustainable development needs of the state, such as housing developments, enhancing food security projects, and building infrastructural facilities – which in place will support economic growth and diversification and preparations for the World Cup that have been consuming a large share of expenditure over the past decade. Therefore, economic and revenue diversification is crucial to the country to manage short-term volatility in oil and gas prices. Figure 5.1 is indicative of how hydrocarbon wealth represents a large share of the revenue based on a relatively low oil price assumption.

Figure 5.1: Qatar’s Revenue Breakdown 2018–2020



Source: Ministry of Finance of the State of Qatar (2020a)

The leading sectors of government spending in 2019 are infrastructure at 16%, healthcare at 11%, education at 9.3% and transportation at 7.9%, accounting for over 44% of government spending (Ministry of Finance, 2019). The state budget for Qatar in 2019 was forecasted at QR4.3 billion in surplus, which marked the first budget surplus in three years, the result of an increase in energy prices in the global market, complemented by an increase in non-oil revenues (Ministry of Finance, 2019). The forecast is based on an oil price assumption of US\$55 per barrel in 2019, as opposed to the US\$45 per barrel in the 2018 budget, with an anticipated revenue of QR211 billion compared with QR175.1 billion for the previous year; and an increased revenue expenditure set at QR206.7 billion an increase of 1.7% compared to 2018. The budget is designed to achieve efficiency and complete major projects that target the developmental needs of the Qatar 2030 vision. The focus on facilitating free zones, which include economic and industrial logistic zones, introduces a new sector to the non-oil economy

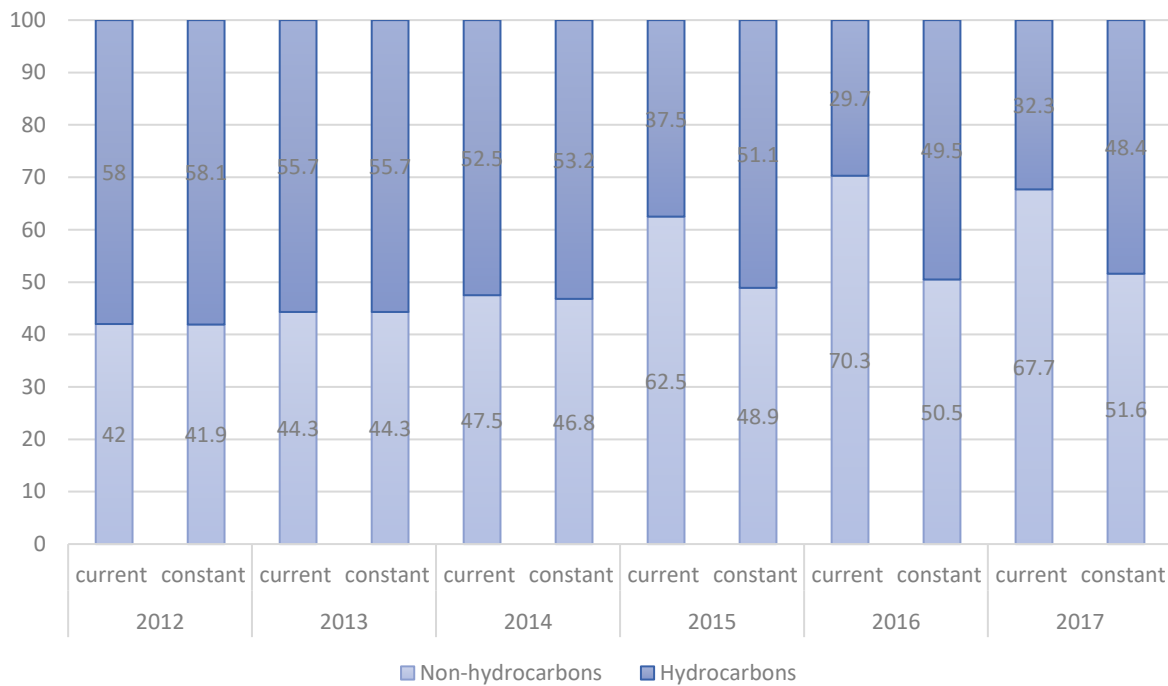
that encourages economic activity due to the economic environment they create. The government has been addressing economic challenges through a comprehensive structural reform to include broadening international trade and financial transactions, an improvement in the business environment and enhanced domestic food production, among other things (IMF, 2019b).

The allocated expenditure on major projects has declined by 3.6% from 2018 due to the completion of large infrastructure projects. The expenditure allocation on major projects is expected to decline over the coming years as many projects that constitute the developmental needs of the state are completed. This factor is crucial, as major projects constitute 44% of government expenditure. As these projects reach completion, expenditure on non-oil sectors will be given a large share of the allocation. This process is evident in the recent allocation of QR48 billion to new projects to boost economic growth, specifically in the non-oil sector (Ministry of Finance, 2019).

In 2019, Qatar withdrew from OPEC after having been a member since the organisation's conception in 1961. Qatar is the first country in the Middle East to leave the organisation. However, the withdrawal signifies a different approach the country intends to take, particularly with a greater focus on expanding its natural gas production market share. Being an OPEC member in the past meant that Qatar had followed production cuts to increase oil prices and balance the market. In fact, Qatar is 'very comfortable' with oil prices based on conservative oil prices of US\$45 a barrel (Fattah, Sergie, & Nereim, 2017). The state has not tapped into its bonds to finance gaps in its budget, running on a negligible deficit accumulated in 2016 after prolonged low oil prices and accompanied fiscal burdens. Unlike other oil-rich states, Qatar has not resorted to tapping wealth from its SWF to finance its budget deficit but is using its SWF to diversify its investment basket.

Qatar's economic clout is considerable. Qatar's GDP for 2021 was US\$179.7 billion, with a GDP per capita (PPP) of US\$102,018, ranked 4 out of 187 countries by the World Bank (2021b). According to the Human Development Index (2021a), Qatar is ranked 42 out of 191 countries with a score of 0.855, which is considered very high in human development. According to Transparency International (2022), which publishes the Corruption Perception Index annually, Qatar ranks number 40 out of 180 with a score of 62 out of 100.

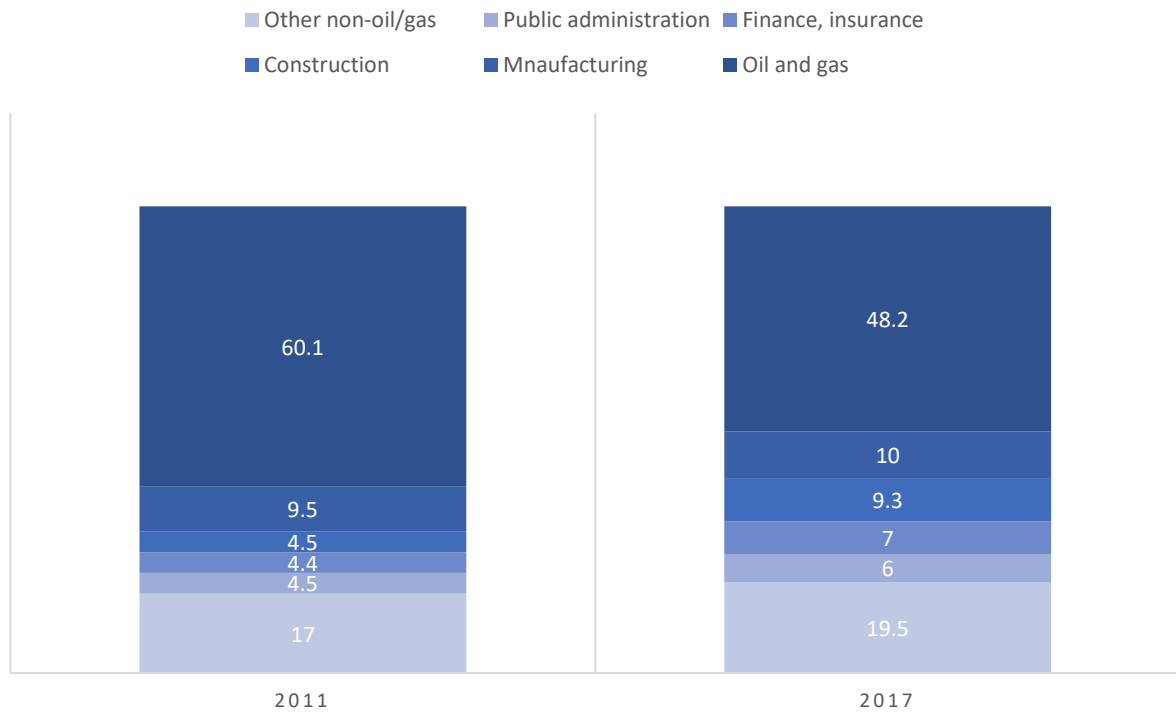
Figure 5.2: Qatar's Hydrocarbons and Non-hydrocarbons, Share in Real and Nominal GDP%



Source: Ministry of Development Planning and Statistics (2020)

As an oil-rich state, Qatar is expected to depend highly on hydrocarbon wealth. Figure 5.2 highlights the non-hydrocarbon to hydrocarbon share in real and nominal GDP, which is surprisingly higher in non-hydrocarbon than hydrocarbons; this is particularly true for the years after 2015. While the economy is still highly dependent on oil wealth, the share of hydrocarbon GDP has declined from 60.1% in 2011 to 48.2% in 2017 as non-hydrocarbon GDP has been stimulated by an increase in manufacturing, construction and finance and insurance sectors (Figure 5.3). Although these figures are promising and show that the country is trying to diversify its composition mix, oil and gas continue to form the bedrock of Qatar's economy. Hydrocarbon wealth has allowed Qatar to achieve extraordinary levels of growth. In 2010, Qatar was the fastest-growing economy in the world, with a real GDP growth rate of 19.40% (Business Insider, 2011). However, when drawing a link between such remarkable growth rates and resource wealth, one should be cautious, as it is problematic to view Qatar simply as a product of substantial wealth spent with abandon; according to Fromherz (2017), money indeed made a difference to Qatar, but it is the use of its resource wealth that has made Qatar stand out. For example, other Middle Eastern states, such as Dubai, have experienced a drastic burst of their economic bubble. However, Qatar's economy continues to grow.

Figure 5.3: Qatar's Real GDP Composition (%)



Source: Qatar National Bank (2018)

Qatar has undertaken many challenges and risks to accomplish the fruits of its wealth. Gas was only discovered in 1971 at a modest rate. The Emir at the time, Sheikh Ahmad bin Ali decided, against the scepticism of many, to borrow heavily in order to build the infrastructure that provided Qatar with the foundations it has today. In 1992 Qatar faced financial difficulties, the state was on a developmental route, and the Gulf War in Kuwait exasperated the need for liquidity. Thus, the then undersecretary of the Ministry of the Economy, Trade and Finance, Yousef Kamal, opposed the view of the IMF and borrowed to expand the capacity and monetise the natural reserves. This controversial decision which seemed to be going against the odds later proved to be a success for the country.

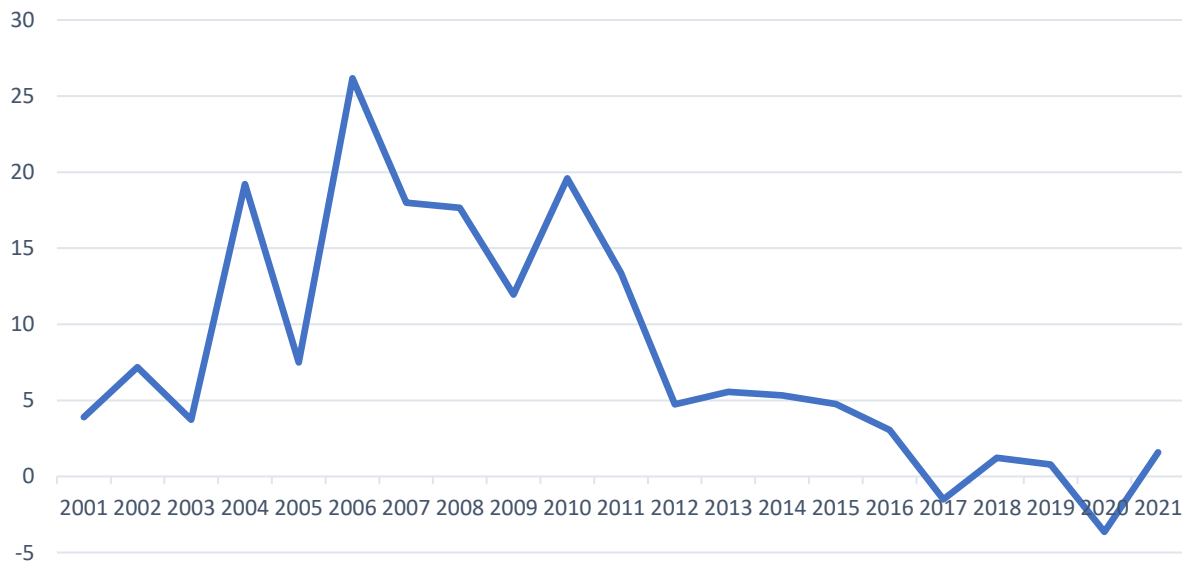
Faced with the unsustainable promise of natural resources, the nation chose the path of economic diversification and social development. Structural and economic changes were swiftly implemented. From fluctuating oil prices since 2014 to changes in the socio-economic structure to the illegal and unjust blockade of the country in 2017 by Saudi Arabia, Bahrain, the United Arab Emirates, and Egypt, who cut diplomatic relations with Qatar – the country is, without doubt, facing a turning moment in its history, one which makes the study of the country's responses and strategies all the more fascinating and pertinent.

5.1. The Hydrocarbon Economy

The economy in Qatar has witnessed a steady decrease in annual GDP growth that can be pinpointed to 2010. The government experienced a deficit of 6.6% of GDP in 2017, which it overcame with a surplus of 2.3% in 2018 as economic activity improved. The GDP growth for 2019 is projected at 2.6%, slightly up from 2.2% in 2018, supported by an increase in hydrocarbon output, a rebound in oil prices and robust growth in the non-hydrocarbon-related sectors of the economy (IMF, 2019b).

The IMF (2019b) reports that Qatar's economy has absorbed the shocks associated with the decline in oil prices of 2014–2016 and the 2017 blockade. The availability of buffers has allowed for the fast absorption of such adverse shocks. The state has continued exporting hydrocarbons, sustaining the trade of the one-third share of global LNG, and maintaining and developing new trade relations. The IMF (2019b) highlights four critical factors that should be a priority for Qatar: fiscal consolidation, a prudent fiscal policy framework, a resilient financial sector, and a diversified economy.

Figure 5.4: Qatar's Annual GDP Growth From 2001 to 2021

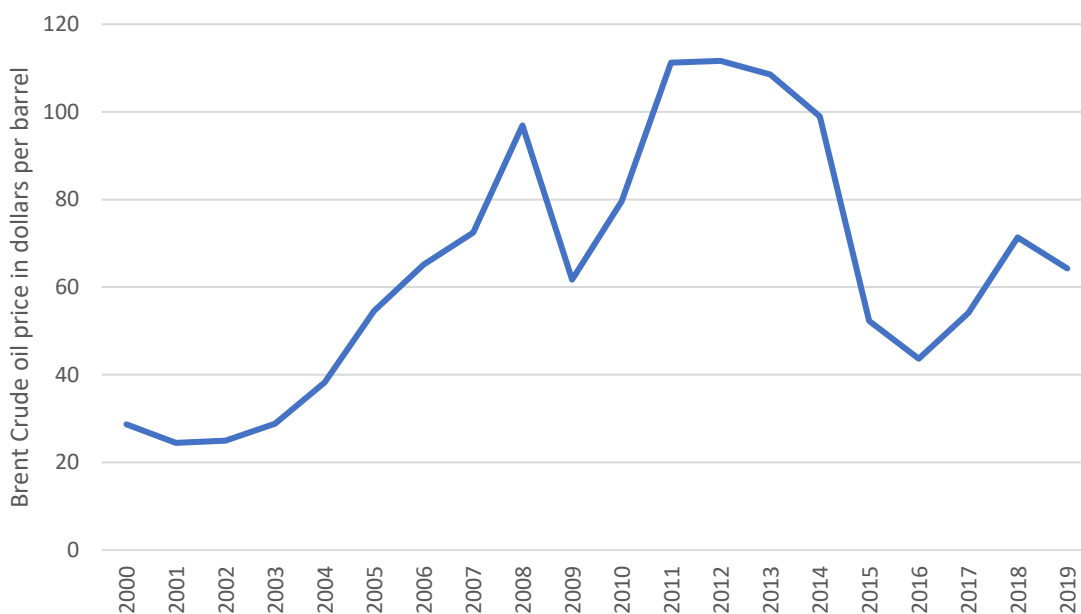


Source: World Bank (2021)

Four factors can explain the slowing down of the economy. First is the declining oil prices. The impact of oil prices on the government's ability to invest in projects is significant. Oil prices declined in 2014 from \$100 to less than \$30 per barrel (Palin, 2016). Qatar's wealth is linked to the price of oil, and thus it affected the government's ability to invest in many projects.

Second, the state experienced two decades of massive spending on infrastructure; the initial growth boom stemmed from massive investment projects domestically. However, currently, the state is moving on to finding new engines of growth. Third, Qatar was long overdue for the structural reforms that it has recently been undertaking and pushed to take action in 2017 after the blockade. In fact, the blockade opened up a unique opportunity for Qatar to demonstrate its potential and capabilities when faced with such an extraordinary challenge economically and politically. Last, many sectors of the economy had not been previously synced with the needs of the market. There was a mismatch between the demand and supply side of the economy. This situation has slowly been rectified since 2017 and is continuously improving.

Figure 5.5: The Brent Crude Oil Price in US Dollars per Barrel for the Years 2000–2019



Source: The chart is compiled using data from EIA (2020)

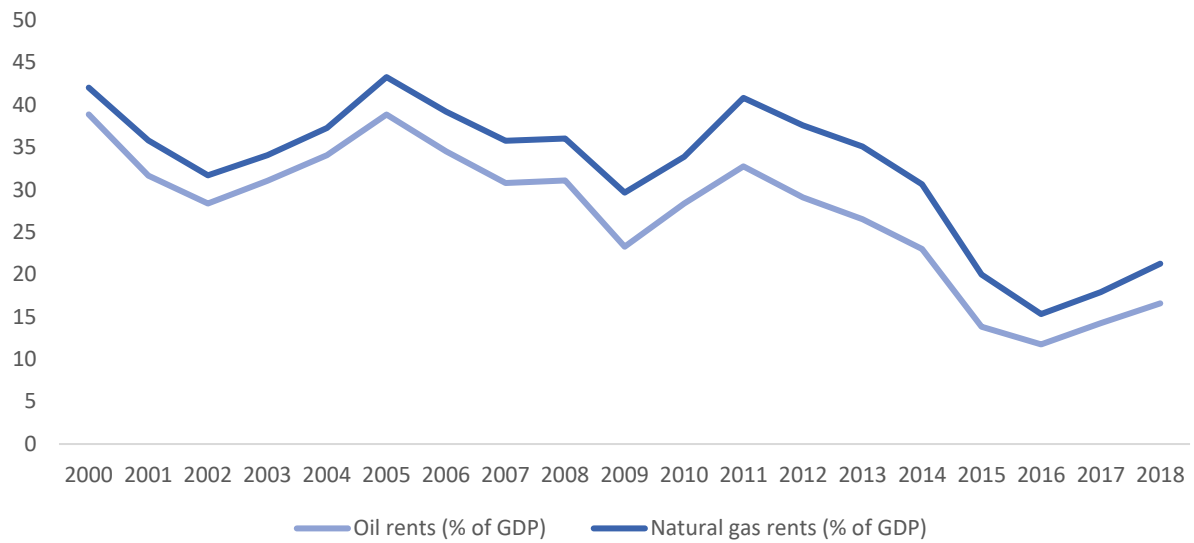
Qatar’s economy is driven by energy export-based development. Preserving wealth for future generations, creating jobs for a highly educated young population and attracting Foreign Direct Investment to Qatar is the focus of many of the initiatives the state is undertaking. Qatar’s achievements in the past two decades (including building transportation infrastructure, advanced healthcare facilities, developing the banking sector and massive investments in education) were facilitated and made possible by resource revenues.

Although commodity prices are volatile in nature, Middle Eastern countries have the lowest break-even oil production cost compared to other oil producers – ranging between \$20 to \$40 per barrel, according to Klein (2017). The IMF estimates that Qatar and Kuwait, for instance,

would need to have oil prices to be between \$50 and \$60 per barrel to break even (IMF, 2019a). This is not the case for other regional oil economies; for example, Saudi Arabia needs oil prices to exceed \$100 per barrel. The last time oil prices dropped to this extent was during the global financial crisis in 2008, when oil prices reached \$147 before collapsing to less than \$40 a barrel. Policymakers are not as pragmatic in response to oil price fluctuations. Many face a prisoner's dilemma because limiting the oil supply is in the best interest, ultimately driving up oil prices and benefiting all oil exporters. However, much like the prisoner's dilemma, although restricting the supply would benefit the parties collectively, it is much more tempting to increase the oil supply on an individual state basis and sell more oil. When supplies are cut, and prices are high, it is more challenging for oil exporters to sell the desired amount – therein, they are faced with a dilemma. Acting in their self-interest is seen as the best option for each party involved, even though it ultimately leads all parties involved to a non-cooperative equilibrium.

Economically, Qatar's growth was tepid in 2019, which according to the World Bank (2020a), reflects the sluggishness in the hydrocarbon and non-hydrocarbon sectors. The hydrocarbon sector has reflected a curb in its production due to a capacity expansion plan, which would increase the capacity of liquefying gas in the future. This involves complex and sophisticated technology, as producing LNG and converting it back into gas is costly. The non-hydrocarbon sector has reflected a gradual slowdown after having experienced a boom for a decade consisting of the execution of significant infrastructural projects in preparation for the World Cup 2022. Growth in 2020 was projected to stall and to grow towards 3% in the medium term, influenced mainly by a consolidated service sector and an injection of US\$16.6 billion into the economy over the next four years – to keep up with the Qatar National Vision of 2030 primarily driven by infrastructural and real estate investments, working as a V-shaped recovery along with the World Cup 2022 based investments (World Bank, 2020a). Nevertheless, the challenges highlighted by the World Bank (2019a) include oil price volatility, political tensions concerning the blockade, regional instability, and the diversification of the economy away from hydrocarbons. It will be particularly challenging for the state if government spending continues to increase, as low hydrocarbon prices will pressure the production and price of LNG. According to the World Bank (2020a), this will weaken fiscal and external balances. Qatar relies primarily on long-term natural gas contracts, not subject to the same short-term oil price volatility (Figure 5.6).

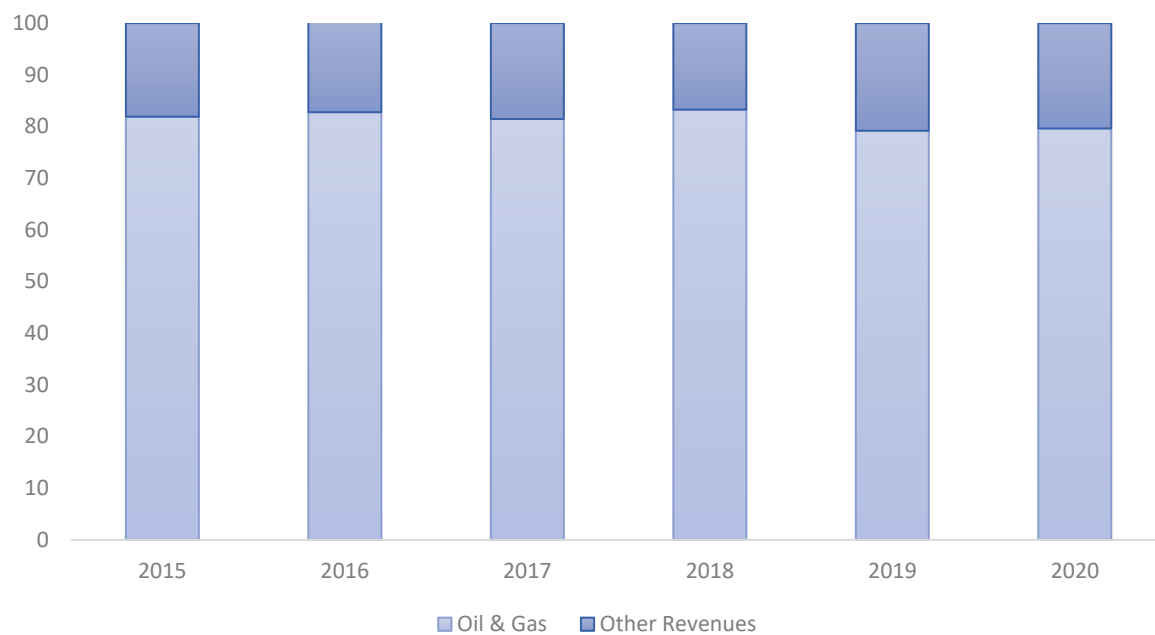
Figure 5.6: The Percentage of Oil and Gas Rents as a Percentage of GDP



Source: World Bank (2019c)

Qatar's dependence on the hydrocarbon sector makes the state susceptible to global market volatility. Furthermore, according to the IMF (2019b), SWFs allow for a gradual fiscal consolidation that gives states the stimulus to be prepared for shocks without distorting market stability. The annual budget is based on conservative oil price assumptions to delink the government's spending expenses from hydrocarbon wealth; price volatility associated with hydrocarbon price instability affects the macroeconomic framework significantly (IMF, 2019b). Such assumptions highlight the importance of decoupling government expenditure from resource wealth revenues. However, according to the IMF (2019b, 10), 'Qatar has ample fiscal and external buffers to address the potential macroeconomic and financial implications of lower hydrocarbon prices and other downside risks'.

Figure 5.7: The Percentage of Oil and Gas Revenues as Part of Total Government Revenues



Source: Ministry of Finance of the State of Qatar (2020a)

The future of oil wealth is uncertain, not because of its exhaustible nature, but because of the changes in demand in the world market and new emerging producers entering the world market as oil exporters, which will inevitably affect oil prices and overall revenues. The next energy transformation will be driven by oil availability and relative prices. However, this will not be the primary cause of change, but change will also be driven by technological changes in production that may change the production function of oil production. This possibility comes with developments in the oil market that depend on changes in the international political economy.

5.1.1. The Impact of the 2017 Blockade

An unanticipated challenge occurred on 5th June 2017. Three Gulf Corporation countries, Saudi Arabia, the United Arab Emirates, Bahrain, and an African country – Egypt – cut diplomatic ties with Qatar. Qatar’s reaction to the blockade was unexpected for the three neighbouring countries. The unity, homogeneity and cohesion of the Qatari social fabric came as a surprise to many. This came from a profound social structure that showcased a social reality that was deeply rooted, despite the whiplash of the blockade. The social fabric of the Qatari society, the solidity, was the basis of Qatar’s rise and consolidation within the broader Middle East. The reverberations from the past blockade on Qatar and the political and economic order in the Gulf have never been challenged to such an extent. In the void created by the blockade, Qatar has begun to rise economically far better than many anticipated.

According to the World Bank (2019a), a year after the blockade in 2018, Qatar’s growth recovered to 2.1% as the economy largely overcame the constrictions posed by the blockading states in June 2017. This is an important indicator as the country picked itself up after facing unprecedented economic challenges. The blockading states blocked air, land, and sea routes from the peninsula, which meant that Qatar had to act quickly and find other routes, for travel, exports and imports.

According to the IMF (2019b), Qatar Central Bank’s foreign reserves have recovered from the blockade’s impact. As demonstrated in Table 5.2, they have recovered to US\$30 billion from declining to US\$15 billion in 2017. Qatar Central Bank reserves cover 44% of QIA. The fund ‘provides an additional buffer’ with its diversified portfolio allocation (IMF, 2019b).

Table 5.2: Foreign Reserves to QIA Assets (Billions of US Dollars)

	2012	2013	2014	2015	2016	2017	2018
<i>Actual foreign reserves</i>	33	42	43	37	31	15	30
<i>QIA assets</i>	107	141	174	194	293	321	327

Source: IMF 2019b

Qatar’s resilience amidst the blockade has been the focus of many news outlets. Recently many scholars have focused on analysing what Qatar has been doing that allowed it to weather the storm surprisingly well and not fall victim to the blockade. According to a study by the Bertelsmann Transformation Index (BTI) (2020, 3), which analyses transformation processes

and identifies successful strategies, Qatar has ‘shown resilience and a steep learning curve’. The BTI gives Qatar a score of 7.89 out of 10 for economic transformation, which puts Qatar in the economically advanced group of countries, ranking 16 out of 137. Six years into the reverberations of the past blockade has led to an economy stretched to its potential. The blockade acted as a stimulus to many sectors of the economy that intensified their commitment to economically bolster the domestic economy and diversify their import mix, which in the past was heavily dependent on the neighbouring blockading countries. The measures introduced post-blockade included initiatives to attract foreign investments and efforts put into developing domestic industries and facilitating the setup of domestic businesses to encourage domestic contribution and substitute for the fall in imports. The BTI (2020, 3) attributes Qatar’s intensified efforts to diversify the economy and promote greater self-sufficiency to the blockade, in fact, one year post the blockade, in 2018, the government achieved a budget surplus for the first time since 2015.

The blockade set a new trajectory for Qatar, which sets it apart from the other regional states. Studying the developments in policy choices, economic status, and investment allocations during this period provides this study with a one-off opportunity to analyse an unprecedented historical event in relation to Qatar’s SWF and the dynamics that occur after that. The blockade could completely break the country’s economic structure or strengthen it to levels far beyond what it could have achieved had the blockade not been initiated. An essential factor to highlight is the successful transfer of funds from the central bank reserves and their SWF’s foreign assets, which according to the BTI (2020, 20), allowed for the preservation of financial and macroeconomic stability. In an IMF report (2019b, 19), the appraisal stated, ‘Qatar’s economy has successfully adjusted to the dual shocks of lower oil prices and diplomatic rift. Prudent fiscal policy, an appropriate monetary anchor, sound financial regulation and supervision frameworks and considerable buffers continue to underpin strong macroeconomic performance’. Undeniably, the crisis has opened a window of opportunity for Qatar to undertake the challenging structural changes needed. Ironically such pressures have obligated Qatar to diversify the economy and reduce its dependence on the oil sector while achieving increased self-sufficiency, taking the lead in the world as an example for its neighbouring states to follow (BTI, 2020: 38).

5.2. The Qatar Investment Authority

Oil wealth has enabled Qatar to amass substantial oil windfall, which is channelled into an SWF. The QIA is the SWF of the state of Qatar, one of the largest Middle Eastern SWFs (Table 5.3). The QIA was established in 2005 to streamline the management of excess resource revenues by diversifying the economy's asset allocation. The purpose of QIA (n.d.) is '[t]o invest, manage and grow Qatar's reserves to create long-term value for the State and future generations'. It is, therefore, a savings fund that seeks to achieve long-term investment returns with a relatively higher risk orientation than the average savings fund, which fits perfectly into the Investment-Income Fund definition discussed earlier. After revisiting the mandate of QIA in 2021, two new components were added to the mandate: to support Qatar's economy by investing in local companies and to provide liquidity to the local economy when needed. This development in the fund's mandate came at a time when the fund had made the necessary adjustments in the face of the challenges experienced and the needs of the state.

Table 5.3: Ranking of the Top Ten Largest Sovereign Wealth Funds in the Middle East by Total Assets

Rank	State	SWFs	Inception	Assets under management/US\$	Source of funding
1	United Arab Emirates	Abu Dhabi Investment Authority	1976	790,000,000,000	Oil
2	Kuwait	Kuwait Investment Authority	1953	750,000,000,000	Oil
3	Saudi Arabia	Public Investment Fund	1971	607,418,895,000	Oil
4	Qatar	Qatar Investment Authority	2005	475,000,000,000	Oil
5	United Arab Emirates	Investment Corporation of Dubai	2006	305,000,000,000	Oil
6	United Arab Emirates	Mubadala Investment Company	2002	284,000,000,000	Oil
7	United Arab Emirates	Abu Dhabi Developmental Holding Company	2018	157,000,000,000	Oil
8	Iran	National Development Fund of Iran	2011	139,000,000,000	Oil
9	United Arab Emirates	Emirates Investment Authority	2008	87,000,000,000	Oil
10	Bahrain	Mumtalakat Holding	2006	18,268,845,719	Oil

Sources: Sovereign Wealth Fund Institute data and fund documentation as of 2023

Such additions to the mandate signify two essential aspects: first, the fund has an active role and is responsive to the liquidity needs of the state, which also shows that the fund is synced with the state's economic needs. This development is significant as it means the fund is not an institution estranged from the state. Second, where previously the fund would invest abroad and occasionally domestically, it clearly states that it will support Qatar's domestic economy

by investing in local companies. Thus, fine-tuning their mandate to suit the demands of the economy, and fulfilling the role that SWFs essentially are established for.

After establishing the fund, the QIA worked on building a credible governance and operational structure: adopting international standards and becoming a member of institutions such as the International Forum of Sovereign Wealth Funds (IFSFW). The IFSWF promotes best practices and endorses the Santiago Principles, which comprises a series of guiding principles founded by the IMF as a result of multilevel agreements in association with the SWFs and the investment recipient countries. A commitment to the Santiago Principles and the IFSWF signals that QIA has the capacity to manage its assets efficiently. The Santiago Principles are believed to guide operational and investment activities, which in effect improve transparency. The IFSWF (2011, 43) provides the SWFs' responses to the helpfulness of the Santiago Principles in guiding their operations and investment practices, QIA stated the following: 'Since commencing operations in 2006, QIA has become a major and sophisticated international investor. While the SP has not guided QIA in its organizational development, they do reflect the organizational structures and procedures that QIA has put in place since its inception'.

The QIA experiences substantial positive cash flow and has no liabilities. Although some investments in, for instance, real estate, may need leverage at the fund level, the positive cash flow that QIA benefits from allows it to operate without getting involved in leverage (IFSFW, 2011). While the fiscal balances and accumulated financial assets provide Qatar with a significant forte, the IMF (2019b, 18) stresses that QIA's asset allocation strategy must consider Qatar's significant dependence on hydrocarbon. In the World Economic Forum annual meeting of 2020, QIA's Chief Executive Officer (CEO) announced that the fund would make no new investments in fossil fuels (QIA, 2023a).

5.2.1. Governance and Institutional Structure

A board of directors governs QIA; however, the CEO and executive management manage the institution's day-to-day affairs. Acting with overall independence in line with QIA's overall strategy, policies, and guidelines. The government of Qatar does not interfere in QIA's investments or business decisions, which are made strictly based on economic and financial criteria and with a long-term investment horizon (QIA, n.d.). The funds assigned to QIA are

allocated by the Supreme Council for Economic Affairs and Investment. The Ministry of Finance also assigns additional funds depending on the surplus. The government of the State of Qatar has established QIA as a savings fund, and thus no pre-defined liabilities are set. The fund reinvests the investment returns generated, and only under emergencies of illiquidity will fund returns be used. A recent example was in 2017, after the blockade, QIA deposited dollars in local banks as ‘pre-emptive’ (Arnold & Finn, 2017). This example illustrates the fund’s active role and the adequate response by the directing bodies to the needs of the domestic financial sector. The board members of QIA also hold important positions in the state, which allows for knowledge and expertise to be shared in an organised manner. The board of directors constitute the Governor of Qatar Central Bank, the Minister of Finance, the Minister of Foreign Affairs, the Secretary to State for Investment Affairs, the Minister of Energy, the Minister of Commerce and Industry and the Deputy Secretary General for Investment Affairs.

Domestically, QIA has four large subsidiaries, these affiliates have distinct directing bodies, but QIA is the steward and holding company. Namely, they are:

- Ooredoo – an international telecommunication company located in the capital Doha
- Qatar National Bank – a commercial bank
- Qatari Diar – a sustainable real estate development company
- Katara Hospitality – a global hotel owner company

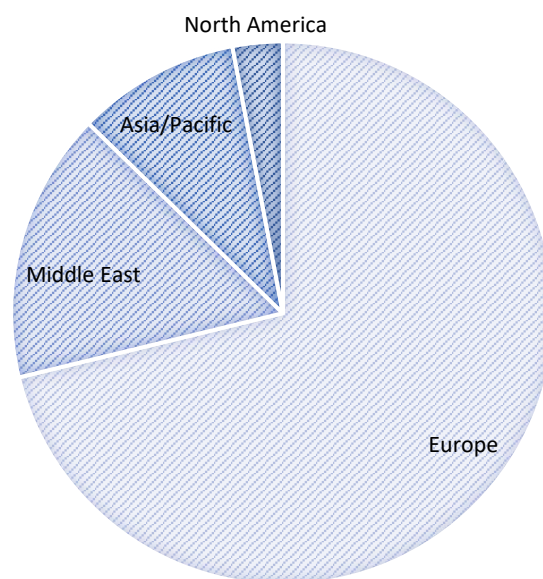
No other SWF has invested in domestic companies in such a way, where each company has its distinct management process and a board of governors. Each company serves a distinct role and is diverse in its economic activities, providing the fund with a diversified asset allocation. However, they are independent of the fund’s international investments; although subsidiaries, such as Qatari Diar and Katara Hospitality, invest abroad, their investments are aimed at hospitality and real estate developments and are entirely separate from the investments that QIA undertakes.

5.2.2. Investment Strategy and Allocation Patterns

The fund's asset allocation is diverse, and the fund utilises technocratic expertise in the form of internal and external investment managers. The QIA is particularly interested in developing its internal investment management expertise (IFSWF, 2011). The fund's investment strategy has developed since its establishment. This includes the allocation of investments, asset classes, and the geographic allocation of assets. This development is reflective of the dynamic role of SWFs. Further, the fund's development shows that the fund has adapted to market changes and has responded by investing in specific industries, such as the remarkable increase in investments in technology.

The portfolio distribution for QIA as of 2020 is as follows: it invests 65.2% of its funds in financials (this includes investments in banking and investment services), 29.5% in technology (this includes investments in software and information technology services), 2.1% in industrials (this includes investments in professional and commercial services, aerospace and defence), 2.3% in healthcare (this includes investments in pharmaceuticals) and 0.8% in consumer non-cyclicals (this includes investments in food and personal household services) (Thomson Reuters, 2020).

Figure 5.8: The Geographical Distribution of the QIA Portfolio



Source: Thomson Reuters (2020)

The portfolio distribution of QIA is diverse, along with the geographical distribution of investments. The largest share of the pie shows investments in Europe (Figure 5.8). According to the CEO of QIA, Al-Mahmoud, the geographical concentration of investments in Europe is largely because they are familiar with the laws and the contacts they have established over the years, making the business environment strong (Al-Mahmoud, Interview: 2019).

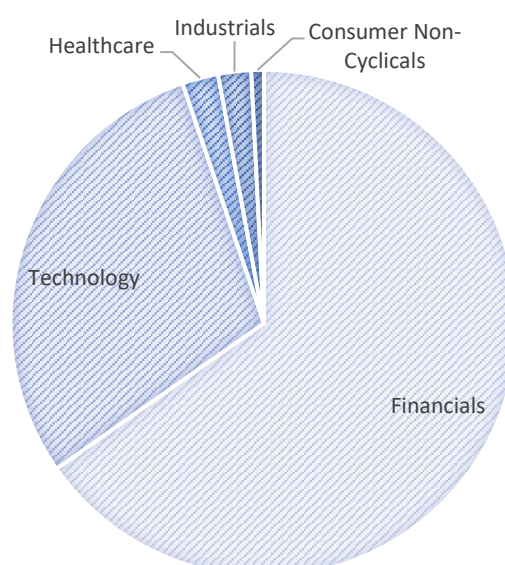
Table 5.4: Break Down of QIA’s Total Value Held in Invested Industries

Industries	Value held in million US\$	Number of securities held
Energy	719.12	1
Industrials	3,835.05	3
Consumer Cyclicals	11,762.55	6
Consumer Non-Cyclicals	1,510.06	6
Financials	15,825.42	17
Healthcare	648.94	2
Technology	81.48	1
Telecommunications Services	56.54	1
Utilities	9,436.98	4
Total	43,876.15	41

Source: Thomson Reuters (2020)

Table 5.4 summarises QIA’s investments categorised by industry and the number of securities held. The securities held are diversified. However, as of 2020, a significant share of securities is held in financials; the overall value held is US\$15,825.42 million, in comparison to, for instance, healthcare which holds securities with a value of US\$648.94 million.

Figure 5.9: The Portfolio Distribution of QIA



Source: Thomson Reuters (2020)

The CEO of QIA noted that they have not invested as much in industries such as healthcare and are weak in exposure in the United States and Asian markets (Al-Mahmoud, Interview: 2019). Furthermore, Table 5.5 presents the top ten QIA holdings in terms of a portfolio percentage value, which is indicative of the diversified structure of assets held in terms of industry and portfolio percentage value. Although, the top three holdings held constitute a large share of the portfolio ownership, the remainder of holdings held are between 3–5%, which is a reasonable ownership value given the diversified portfolio mix. The top industries in terms of portfolio percentage value are financials, industrials, utilities, consumer cyclicals and consumer non-cyclicals. Although real estate ownership is not included in the breakdown, it constitutes a crucial position in the portfolio ownership of QIA. The CEO of QIA expressed the importance of real estate to QIA and Qatar, noting that they are culturally appealing and considered secure (Al-Mahmoud, Interview: 2019).

Table 5.5: Top Ten QIA Holdings

	Holding name	Portfolio percentage value	Number of shares owned (millions)	Industry
1	Volkswagen AG	20.47%	50.15	Consumer Cyclicals
2	Iberdrola SA	15.86%	553.15	Utilities
3	London Stock Exchange Group PLC	7.90%	35.74	Financials
4	Vinci SA	5.65%	22.38	Industrials
5	Barclays PLC	4.42%	1,017.46	Financials
6	Qatar Islamic Bank QPSC	4.26%	405.70	Financials
7	HK Electric Investments Ltd	3.95%	1,758.40	Utilities
8	Tiffany & Co	3.49%	11.82	Consumer Cyclicals
9	Credit Suisse Group AG	3.33%	133.22	Financials
10	Masraf Al Rayan QPSC	3.15%	1,189.57	Financials

Source: Thomson Reuters (2020)

The QIA website highlights that QIA has been a major investor in real estate since 2006. It further notes that the fund’s portfolio comprises commercial, residential, retail, logistics, data centres, hospitality assets, joint ventures, and corporate acquisitions (n.d.). The CEO of QIA noted that in every century, there is a lead sector in terms of investments and that we are in a time where technology is leading the industries (Al-Mahmoud, Interview: 2019). This phenomenon could explain why the fund’s second largest portfolio distribution is in technologies, with 29.5%, as shown in Figure 5.9.

In a report by PricewaterhouseCoopers (2019, 6), the importance of technology was highlighted in relation to emerging global trends, in fact, ‘technology is changing real estate’. Such global trends and investment shifts can be attributed to ‘rapid changes in technology,

demography and social norms’ (PricewaterhouseCoopers, 2019: 19). Technology is considered an easier security to sell than, for example, real estate, making it an attractive industry in the present day. Furthermore, according to Al-Hammadi (Interview, 2019), Head of Active Investments at QIA, the fund is opportunistic in its functions; the bulk of investments made post-2008 were opportunistic and not based on specific market trends. If QIA were investing within a set benchmark, they would not have been able to benefit from many of the investments that they were able to acquire during a critical financial time such as the global financial crisis. According to Al-Hammadi (Interview, 2019), a temporary portfolio allocation imbalance is considered acceptable, as QIA has a long-term portfolio prospect: a single transaction is part of a bigger portfolio allocation.

The opportunistic investment behaviour of QIA views market volatility and plummeting asset prices as prime times to diversify their basket of investments into new industries or increase their acquirement of a particular sector. According to Al-Emadi, a member of QIA’s board of directors, they are particularly interested in investing in the health and technology industries, ‘we are looking at businesses that we believe will prove resilient over the long term’ (England, 2020). Table 5.6 captures the direct investments that QIA invested in from 2016 to 2020. Technology and healthcare were the only two sectors in which they invested in 2020, with one investment in financials.

The IFSWF (2011) recognises QIA’s commitment to its strategic investment mandate and operations, which are based on economic and financial objectives along with its equity investment activities. The strategic investment mandate is not motivated by political considerations. The investment execution considers environmental and humanitarian principles. Given the long-term investment horizon and value creation of SWFs, the considerations taken of market outcomes are crucial. The QIA is one of the six founding members of One Planet Sovereign Wealth Funds (One Planet Summit Sovereign Wealth Funds, 2018: 3), which accelerates efforts to integrate the financial risks and opportunities ‘related to climate change in the management of large, long-term and diversified asset pools’. This initiative shows a positive outlook on the fund’s long-term performance as it undertakes such considerations. It also shows that the fund is contributing to the global move towards a more conscious environmental responsibility.

Table 5.6: Public Investments From 2016 to 2020

<i>Direct Investments</i>				
<i>Company Name</i>	Industry	Company Status	Last Investment Date	Location
<i>Praxis Precision Medicines Inc</i>	Healthcare	Went Public	28-Jul-2020	United States
<i>Curevac GmbH</i>	Healthcare	Went Public	21-Jul-2020	Germany
<i>Xiaochuan Chuhai Education Technology Beijing Ltd</i>	Technology	Active	29-Jun-2020	China
<i>Social Finance Inc</i>	Financials	Active	21-Apr-2020	United States
<i>Dun & Bradstreet Inc</i>	Technology	Went Public	08-Jan-2020	United States
<i>Califia Farms LLC</i>	Consumer Non-Cyclicals	Active	15-Aug-2019	United States
<i>Oryx Midstream Services LLC</i>	Energy	Active	07-Aug-2019	United States
<i>Urban Compass Inc</i>	Technology	Active	30-Jul-2019	United States
<i>Think & Learn Pvt Ltd</i>	Technology	Active	10-Jul-2019	India
<i>The Glendon</i>	Financials	Active	01-Jul-2019	United States
<i>Super Home Inc</i>	Consumer Non-Cyclicals	Active	17-Apr-2019	United States
<i>Bharti Airtel Africa BV</i>	Telecommunications Services	Active	31-Jan-2019	Netherlands
<i>Shanghai Lujiazui International Financial Asset Exchange</i>	Financials	Went Public	31-Dec-2018	China
<i>Bedrock Manufacturing Company LLC</i>	Consumer Non-Cyclicals	Active	28-Nov-2018	United States
<i>OncoResponse Inc</i>	Healthcare	Active	11-Sep-2018	United States
<i>D2iQ Inc</i>	Technology	Active	07-May-2018	United States
<i>Gigamon Systems</i>	Technology	LBO	27-Dec-2017	United States
<i>Codiak Biosciences Inc</i>	Healthcare	Went Public	29-Nov-2017	United States
<i>Asia Square Tower I</i>	Financials	Active	06-Jun-2016	Singapore
<i>Vente Privee.Com SA</i>	Consumer Cyclicals	Active	14-Apr-2016	France
<i>Asciiano Ltd</i>	Industrials	Went Public	14-Mar-2016	Australia

Source: Thomson Reuters (2020)

The QIA assess its performance against the Generally Accepted Principles and Practices, which provides for appropriate governance, the conduct of SWF's investment and accountability 'as part of its ongoing compliance monitoring program, undertaken by the Compliance Unit of the Legal Department of QIA' (IFSWF, 2011: 43). According to the IFSWF (2011), QIA's board approves the investment strategy, along with its complex asset allocation and investment guidelines and then portfolio performance is measured on a predefined framework and reported. However, the report is only disclosed to an internal board, and the performance measurements mentioned by IFSWF are not further explained. The IFSWF (2011) notes that measurements for identifying, assessing, and thus mitigating risk are in place through a prudent long-term investment approach that limits the concentration of asset allocation across states, asset classes, and currency.

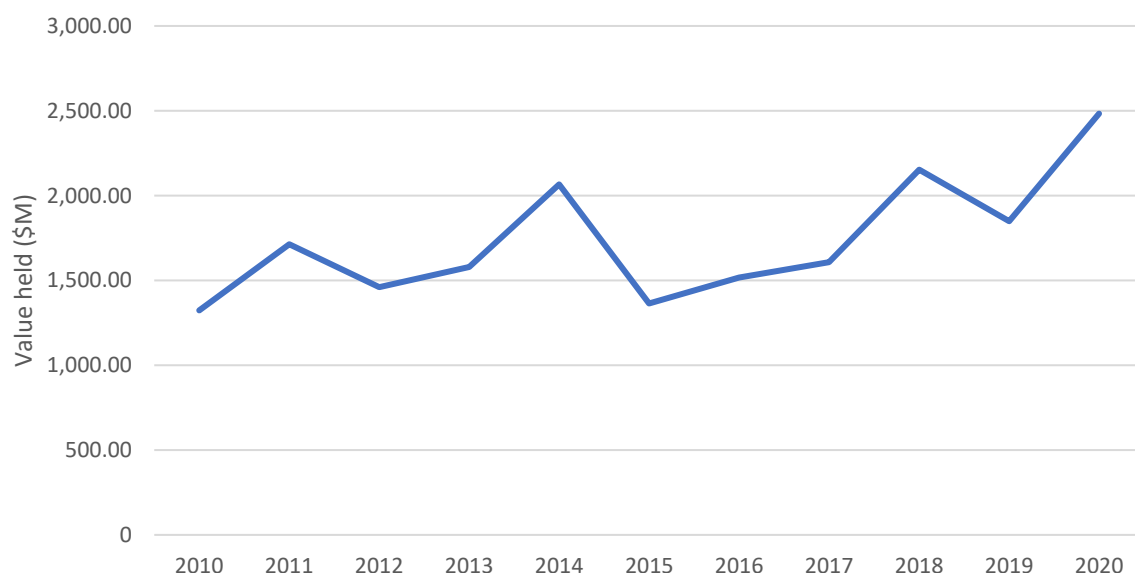
5.2.3. Long-Term Vision

Although investment asset allocations have evolved over the years of fund operation, the fund's long-term vision has remained unchanged. During unstable times in the global financial market, QIA has remained a patient shareholder and has not tapered with its assets. If the SWF reacted hastily with its assets – selling recently bought assets in response to a sudden market low – then it is understandable to begin to question its legitimacy and whether it serves its purpose of wealth preservation for an unknown future. This is an important observation to make, as the role of SWFs as long-term investment vehicles is maintained by QIA. Investing globally does not only serve the fund financially in preparation for an uncertain hydrocarbon future, but also provides Qatar with the skills and personnel needed, further establishing the state as a global financial power. Investing in the state's resource wealth also catalyses further financial activity, which in effect leads to economic diversification.

This long-term vision has also led QIA to strategically acquire assets in a manner that assesses the present and future possibilities. For example, in 2008, QIA acquired energy services and equipment company Cegelec SAS from Alpha Group for €1.7 billion. Later in 2009, Vinci, a concessions and construction company, swapped a stake of 8% of the company for the Cegelec unit that Qatar had acquired (Reuters, 2009). What is particularly interesting is the fact that Vinci was one of the companies that were bidding to acquire Cegelec along with QIA. The value of Vinci held by QIA in 2010 was US\$1,323.37 million, and in 2020 QIA held US\$2,483.16

million of Vinci (Figure 5.10). Acquiring Cegelec from QIA obligated Vinci to offer QIA 5.78% of the capital, making it the largest shareholder of Vinci after the group’s employee savings funds (Vinci, 2010). As a result, of the contribution of Cegelec – QIA and Vinci signed a stable shareholding agreement, which offered QIA a seat on Vinci’s Board of directors and ultimately became a member of the Strategy and Investments Committee. Over ten years have passed, and QIA has maintained its position and shares in the company. This acquisition exemplifies a long-term vision investment and a very cunning investment transaction. By acquiring Cegelec, QIA understood the company’s importance to the industry and its potential. Further, when Vinci swapped ownerships with QIA, it was a deal that Vinci was unaccustomed to; thus, this provided QIA with a share in a highly reputed company that if it had not been for the proposed offer by the mother company, QIA would not have been able to acquire such shares in the company. In fact, acquiring Cegelec initially was a bold and significant decision; investing in Western hi-technology industries is in marked contrast to where most of QIA’s fellow SWFs would typically invest (MEED, 2008). Investing in sector-specific industries, which in this case was advanced engineering offers QIA a diversification prospect that balances the traditional real estate and finance acquisitions where most SWFs invest in. This investment was undertaken in the early stages of the fund’s establishment. It could be understood as setting the stage for the type of investors they were and the remarkably different vision they possessed.

Figure 5.10: The Value Held by QIA From 2010 to 2020 of Vinci SA



Source: Thomson Reuters (2020)

A more typical investment, yet one of the most high-profile acquisitions by QIA is a 7.96% share in Barclays in 2008. The hefty deal made the fund the largest single shareholder in the bank at the time. However, a lot has changed over the span of twelve years. As of 2020, QIA owns a 5.86% stake in Barclays, making it the bank's second-largest investor. In 2012 QIA sold a large share of its stakes at Barclays making a gain of 1.7 billion pounds, according to estimates by Reuters (Roumeliotis & Slater, 2012). The bid that was essentially placed on Barclays in 2008 was 5.3 billion pounds. However, in the transaction undertaken in 2012, 1.5 billion pounds of warrants were cashed at a 600 million pound profit. Although, it could be argued that by selling warrants, QIA did not view Barclays as a long-term investment. However, in a Reuters press release, the CEO of QIA at the time Al-Sayed, stressed that Barclays was a long-term strategic investment for the fund (Roumeliotis & Slater, 2012). In fact, the selling of warrants in 2012 was an intelligent decision on behalf of QIA, which was one of the largest investors in Barclays at the start of the financial crisis. The gains that were achieved in a relatively short period would usually take investors years, if not decades, to achieve. However, because QIA was able to take advantage of such an opportunity and take the risk, it could reap at least some of the riches of its investment in a relatively short time frame.

Table 5.7: A Comparison of QIA's Portfolio of Barclays When the Security Was First Purchased in 2008 in Comparison to 2021

Barclays PLC	Value Held (US\$ million)	Number of Shares Held (million)	% Of Portfolio Value	% Traded Shares	Market Capitalisation (US\$ million)
2021	2,262.37	1,017.46	4.91	5.86	
2008	3,504.66	522.76	34.91	7.96	
					42,146.07

Source: Thomson Reuters (2021)

Table 5.7 compiles the data available for the fund's acquisition of Barclays in 2008, when QIA first invested in Barclays, compared to 2021. As evident from Table 5.7, the percentage of shares traded has decreased by 2.1%, which was cashed in 2012. This is further reflected in the percentage of portfolio value. However, the number of shares held has doubled, although the value held has decreased by 1.3 billion; the substantial number of warrants sold in 2012 explains it. The fact that the number of shares held has increased substantially reflects the long-term investment motive and that QIA is not hesitant to take action and sell when opportunities

arise, especially when they are one of the largest shareholders in the bank. In 2020 Reuters published an article that is titled ‘how Qatar saved Barclays’, in which Ridley and White (2020) highlight how iconic QIA’s investment in Barclays was in paving the way for other financial backers such as Abu Dhabi, Singapore’s Temasek and Japan’s Banking Corporation Sumitomo Mitsui, which ultimately allowed Barclay’s to raise approximately 11 billion pounds at a time where the banking sector was experiencing turmoil.

Barclays, Sainsbury’s, Credit Suisse, the London Stock Exchange, Banyan Tree Holdings and Lagardere are the securities that QIA invested in during the first couple of years of its establishment in 2005. Since quantitative information regarding the above securities is available, we can decipher the securities more clearly. Table 5.8 below summarises the value held in each security, the number of shares and the portfolio value. If we take the example of Sainsbury’s over the past fifteen years, the value of shares held has increased, more than doubled, and the percentage of traded shares has increased substantially. Similarly, Credit Suisse projects show an increase in shares held since QIA first invested in the security, which ultimately shows the fund’s long-term vision. Furthermore, Credit Suisse (2020) has established a strategic partnership with QIA in the form of a direct private credit platform providing financing to upper middle-market companies in the form of direct lending to the US and Europe, which is reflective of an investment that has increased in value over the years. The London Stock Exchange acquisitions have increased in value from US\$1,402.43 to US\$4,253.44 million. However, the other indicators, such as the number of shares and the percentage of traded shares, have decreased. This indicates the selling of a portion of shares over some time. After looking at archives of news reports for disclosed information regarding the selling of the London Stock Exchange shares, Reuters (2014) has publicised that after buying 20.86%, QIA sold nearly a third of its stake. This was ahead of the London Stock Exchange’s attempt to raise US\$1.6 billion to buy the US indexes group, Frank Russell, to have a greater position in the international financial services market. According to Reuters (2014), QIA issued a statement declaring that the selling of stocks was part of a ‘routine portfolio management’ proving that the fund still maintains its position in the London Stock Exchange.

Table 5.8: The First Securities Purchased by QIA

<i>Security Name</i>	<i>2021 (Year security was purchased)</i>	<i>Value Held (US\$ million)</i>	<i>Number of Shares Held (million)</i>	<i>% of Portfolio Value</i>	<i>% Traded Shares</i>	<i>Market Capitalisation (US\$ million)</i>
Barclays	2021	2,262.37	1,017.46	4.91	5.86	42,146.07
	2008	3,504.66	522.76	34.91	7.96	
J Sainsbury PLC	2021	1,201.70	481.75	2.60	21.66	6,918.49
	2007	1,040.65	123.30	32.01	7.07	
Credit Suisse Group AG	2021	1,723.81	133.22	3.72	5.44	34,519.18
	2008	2,604.17	99.01	25.94	8.60	
London Stock Exchange Group PLC	2021	4,253.44	35.74	9.19	7.70	73,582.08
	2007	1,402.43	41.70	53.80	20.86	
Banyan Tree Holdings Ltd	2021	36.93	205.87	0.08	24.44	198.41
	2008	48.16	53.97	0.59	7.09	
Lagardere SCA	2021	372.27	17.09	0.80	13.03	3,698.08
	2006	639.42	8.67	-	6.09	

Source: Thomson Reuters (2021)

The securities have not always performed exceptionally, and regardless, QIA has maintained its acquisitions, especially in the Banyan Tree Holdings, which have faced challenges since 2013. These challenges include a stagnant European economy, the anti-corruption effort in China and political instability in Thailand that all affect the luxury resorts and hotels under the Banyan Tree Holdings' umbrella. However, QIA has not sold its shares despite owning a quarter of the company's outstanding shares. The value held since 2008 has decreased despite the increase in the percentage of shares, as clearly shown in the table above. This has not led QIA to sell its shares nor take any action, which suggests that it views such investments as long-term and is not shaken by inevitable short-term market disturbances.

What is evident from the analysis of available data on investments is that QIA looks for opportunities to take advantage of companies facing financial challenges, to bid for a better price. For example, when QIA bid on the German auto-manufacturing companies Volkswagen and Porsche, the two companies were engaged in a complex takeover. The previous example

of Cegelec is similar to the acquirement of Lagardere, as the French company was experiencing a challenging time, and QIA took that as an opportunity. Furthermore, what is most definite is that when QIA invests in companies facing financial difficulties, these difficulties are short-lived. The companies have the potential to improve performance in the future. Although it is a risky task, the market is known to pick up after a slump and that is what QIA has been meticulously picking from the global marketplace.

5.2.4. Trophy Investments as a Branding Strategy

Although many of the above investment examples were undertaken during times that were prime for any investor, not all of QIA's investments can be classified as bargain investments. It has in fact invested in companies and businesses that have been questioned and classified as trophy investments. One is the purchase of the Harrods of London, and another is when QIA paid a far-from-discounted rate for shares in Royal Dutch Shell. Investing in Harrods provided QIA the much-needed exposure in its infancy into the world of investments. It also provides long-term returns that are well worth the premium paid. In an interview with the CEO of QIA, Al-Mahmoud (Interview, 2019) noted that Harrods was one of the investments that reaped many benefits for them, especially during the 2017 blockade. Indeed, acquiring trophy investments as solid long-term assets must not be underestimated. In 2019, Harrods earned 1.8 billion pounds, including concessions in the department store, and reported dividends totalling 1.1 billion pounds (Business Insider, 2021).

Furthermore, investing in Royal Dutch Shell also indicates an investment technique that reasoned the investment as a two-in-one inward-driven investment. Given that Qatar is an oil-rich state, investing in Shell could be seen as counterproductive. However, because Qatar knows that its plant is making Shell significant profits, having its SWF invest in Shell was a smart move. In fact, as a state, it is making profits from this venture in two different ways; first, by giving Shell the authority to extract and sell hydrocarbon resources; second, by acquiring a stake in Shell's profits by having QIA buy shares. Although the price that QIA initially paid for the shares was at a large premium, the fund was well aware of the profits the company was making and its potential in the long term.

Similarly, when QIA invested in the German construction company Hochtief in early 2010, it was well aware of the significant spending capacity of the state in preparation for hosting the 2022 FIFA World Cup. Therefore, acquiring a stake in Hochtief was rather cunning, as it would indirectly be investing the spent money back into its domestic economy. After being a solid investor for five years, in 2015, Qatar divested 5.8% of its 10% stake in the German construction company Hochtief for US\$614 million to Spanish firm ACS. According to newsagents, QIA reported that the sale of its shares was part of routine portfolio management, and the divestment came amid a period where many SWFs had been selling assets, which could be due to plummeting oil prices (Martin, 2015).

The QIA has also sold a number of its investments; for example, it earned US\$892.3 million from selling its Tiffany and Co. shares to the French luxury goods group Louis Vuitton Moët Hennessy (LVMH), which amounted to a 9.3% rate of return from QIA's total investment (Business Insider, 2021). Moreover, QIA was a longstanding investor in LVMH, acquiring a 5.2% stake in 2011; however, when the opportunity arose, QIA did not hesitate to sell. Another example is the Société Foncière Lyonnaise, a real estate investment and management company in which QIA purchased a 6.35% (Table 5.9) stake for US\$189 million in 2014 (SWFI, 2014). Later, QIA sold its acquisition to a Spanish real estate investment trust Inmobiliaria Colonial for US\$854 million. The deal included a non-cash capital increase to Inmobiliaria Colonial and a US\$241 million cash payment to QIA (Fakhir, 2018).

Table 5.9: Securities That Have Been Sold by QIA

<i>Security Name</i>	<i>LVMH Moet Hennessy Louis Vuitton SE</i>	<i>Vectura Group PLC</i>	<i>Dhofar Tourism Company SAOG</i>	<i>BHP Group PLC</i>	<i>Societe Fonciere Lyonnaise SA</i>	<i>Veolia Environnement SA</i>	<i>Banco Santander Brasil SA3</i>	<i>Banco Santander Brasil SA4</i>	<i>Hochtief AG</i>	<i>Lifestyle International Holdings Ltd</i>										
<i>(Year security was purchased and sold)</i>	2012	2011	2015	2014	2018	2009	2017	2013	2018	2014	2018	2011	2017	2013	2017	2013	2015	2010	2017	2014
<i>Value Held (US\$ million)</i>	740.68	740.68	0.79	0.72	25.00	13.61	60.56	29.05	432.94	336.87	666.30	270.59	664.05	640.49	446.73	582.26	698.73	590.71	493.07	781.14
<i>Number of Shares Held (million)</i>	5.23	5.23	0.27	0.29	19.62	8.00	4.01	1.04	6.35	6.35	26.11	24.68	127.81	196.46	127.81	187.11	7.70	7.00	371.12	371.12
<i>% of Portfolio Value</i>	2.48	2.75	-	-	0.06	0.18	0.16	0.07	1.03	0.78	1.57	1.01	1.76	1.46	1.18	1.32	1.64	2.41	1.16	1.91
<i>% Traded Shares Market Capitalisation (US\$ million)</i>	1.03	1.03	0.07	0.08	70.2	48.9	0.19	0.19	13.64	13.64	4.63	4.75	3.32	5.08	3.44	5.28	11.11	9.09	23.16	22.78
	325,058.73		956.57		35.58		174,798.47		3,580.66		15,244.80		25,718.30		25,718.30		6,207.84		1,337.59	

Source: Thomson Reuters (2020)

After investing in Veolia, a French utility, in 2011, in 2018, QIA sold its entire stake worth US\$640 million, which is 26.1 million shares and 4.63% of share capital (Bloomberg, 2018). In early 2017, QIA sold 2.5% of its stake in Banco Santander Brasil for US\$737 million. According to Reuters, QIA took advantage of an 18-month rally that doubled the price of the shares in order to sell (Laier & Parra-Bernal, 2017). In fact, it was reported that investors were surprised by the run-up to the market rally, as it made Banco Santander Brasil Latin America's most expensive bank and led to an increase in the selling of its stocks. Furthermore, QIA sold its entire shareholding of 23.16% (Table 5.9) in China and Hong Kong department store operator Lifestyle International Holdings Ltd for US\$662 million (Reuters, 2018). The Sovereign Wealth Fund Institute (2018) considers this a realignment to its private holding portfolio.

A trend that has become apparent after having analysed the investments that have been sold since the fund was first established is that most of the sold assets came after the blockade of 2017. After having reduced its holdings in the luxury jewellery retailer Tiffany and Co., Credit Suisse Group and Rosneft, Veolia was sold entirely. According to Bloomberg (2018), QIA offloaded shares worth \$417 million in Tiffany and Co. while reducing its shareholding in Credit Suisse to 4.94%. The blockade of 2017 tested QIA's competence and allowed the fund to prove its ability to liquidate wealth in the short term when needed. Qatar's economy and financial system were undeniably tested, and 'QIA has injected billions of dollars into local banks as the ongoing campaign hurts lenders' (Bloomberg, 2018). Furthermore, according to the SWFI, QIA only invested US\$3.5 billion in investments in 2017, compared to the whopping US\$20 billion allocated to investments in 2016 (Bloomberg, 2018).

5.3. The QIA Investments Post-2017: A Needed Boost

The year 2017 marked a very important year for Qatar. Despite, the challenges that the state faced, the changes that occurred during that year set the stage for drastic changes domestically. This includes social behavioural changes on the societal level, risk-taking tendencies, economic independence, export and import diversification and an increased focus on self-sufficiency. It was indeed the push that Qatar needed, a blessing in disguise. With such unfortunate events politically, the economy of Qatar would not have been able to prove itself or its ability to support the domestic economy financially. States generally have pre-empted monetary solutions for economic challenges that can be forecasted, such as shortages in liquidity, inflationary pressures, and currency appreciation, among many others. However, the effectiveness of policy choices is only tested when the challenge hits a state, and their policy choice unravels. The unprecedented blockade imposed on Qatar through air, land and seas was unpredictable and, therefore, unplanned for in terms of policy responses.

Furthermore, 2020 marked a challenging year globally. Amid plunging energy prices, Qatar was further pressed financially. In response to these challenges, QIA pledged its most high-profile European equity investments to raise a 7 billion euro loan in order to help bolster its cash reserves (Parasie, Nair, & Martin, 2020). Although usually there is an air of reluctance to liquidate assets due to the negative repercussions this could entail, ‘this is part of a broader trend of sovereign wealth funds... exploring the use of leverage or loans in their operations to build up returns’ (Parasie, Nair, & Martin, 2020).

The diversity of QIA’s portfolio implants QIA as a significant SWF amongst the top global funds. A list of the investments as of 2021 is presented in Table 5.10. However, fundamentally, 2017 was a turning point for the fund, as the world witnessed an increase in the cash out of investments and the selling of shares. Furthermore, this allowed the fund to prioritise its portfolio basket and fine-tune its allocations. Noteworthy is that issues such as the importance of specific asset allocation to the fund and the shift to more environmentally friendly investments discussed in the interview with the QIA CEO Al-Mahmoud conducted for this thesis in 2019 and discussed in the previous sections were only disclosed publicly in an interview with Al-Mahmoud in 2020. In a Bloomberg television interview in Davos, Switzerland, CEO Al-Mahmoud explained that 44% of QIA’s infrastructure projects are zero-

emission investments, and the plan is to shift to greener assets in the future. Infrastructural investments are prominent in the fund's overall portfolio (Gulf Times, 2020). Al-Mahmoud proclaimed that the fund would no longer invest in the coal business. However, QIA has kept hold of their investments in the oil and gas companies. Al-Mahmoud noted that 'this is a sector that you cannot ignore'. Given that Qatar relies on natural resource revenues, the fund needs to diversify beyond the energy sector, therefore this sector of the portfolio will not expand further (Gulf Times, 2020). The move to a greener asset allocation was in line with the central theme of the 2020 World Economic Forum, namely sustainability and climate change. Al-Mahmoud said that the fund is 'very optimistic' after the US and China reached a trade negotiation agreement considering that they are the world's largest economies. This will be positively reflected in risk management. He further noted that Central banks no longer have the leverage to stimulate the economy and that governments will have to draw on fiscal policy. In the World Economic Forum 2023, Al-Mahmoud noted: 'It's a challenging time. Inflation is the main topic for the global economy [but] we see this as an opportunity to reposition our portfolio' (QIA, 2023b). Globally inflation has been the dictator of prices and, as such, takes a toll on depressed valuations, which QIA is considering an excellent opportunity to increase QIA's exposure in the technology market, venture capital, and financial institutions and reposition its portfolio. Al-Mahmoud highlights QIA's long-term vision in association with investments; thus, market corrections are not an issue. He further notes QIA's interest in investing in renewable energy and the sports sector. Such disclosed conversations of investment strategies are a new direction for the fund. The constant assessment of investment allocations and the repositioning of the fund's portfolio sheds light on the development of the fund as an institution.

Qatar's SWF has demonstrated an active role since 2017; this includes stepping in to take action during periods of economic difficulty. In fact, the successful transfer of funds from the central bank reserves and QIA's foreign assets during the blockade of 2017 preserved the financial system and maintained macroeconomic stability. Such examples of challenges pressure institutions to either prove themselves as legitimate or the negative externalities associated with resource curse theory assumptions resurface. In this case, Qatar's SWF has gone against the odds of the curse, has demonstrated economic development and established a well-functioning SWF. Although the secrecy of the fund often leads to speculations about whether the fund is an active institutional actor, transparency in the case of SWFs is not always beneficial to the fund, especially in the case of acquiring assets and the bidding process. However, as discussed

above, investment allocations and techniques can be explored and understood through thorough analysis.

The resource curse narrative is problematic with the inevitability that it attaches to resources and the alleged curse on resources. However, considering oil-rich states as homogenous entities that are stagnant and incapable of development or effective governance because of their resources almost seems to attribute a sense of blindness to the resource-rich states' inability to function efficiently. This is most definitely not the case. Qatar, an oil-rich state has stood out, and this has been especially true for the past two decades. However, SWFs could plan for a crisis and never see the light of one. In the case of Qatar, its SWF has been challenged and given the opportunity to showcase its ability as an efficient resource wealth fund. The following section considers another case study, Singapore, as a non-resource-abundant SWF, in order to explore whether the source of a fund drives certain investment decisions, allocation of assets or risk appetite. The resource curse theory believes in the effective governance of non-resource-rich states. Thus, exploring the governance of Singapore's SWF and its similarities or differences to the Qatar SWF will shed light on whether governance differs between the two funds. Singapore is a small state, similar to Qatar, that has pitched high in the world of finance and has often been portrayed as a role model for efficiency and effective economic policies. For such, it is the most suitable example to use vis-à-vis Qatar. A non-commodity-based SWF scrutinises the resource curse narrative in relation to governance and allows for the demonstration of governance in two institutions that are namely the same but funded differently.

Table 5.10: QIA Investment Portfolio

<i>Security Name</i>	<i>Value Held (\$ M)</i>	<i>Position (M)</i>	<i>% Portfolio</i>	<i>% Outstanding</i>	<i>Market Capitalisation (\$ M)</i>
<i>Volkswagen AG</i>	10,324.99	50.15	23.14	16.99	98,155.83
<i>Iberdrola SA</i>	7,596.86	553.15	17.03	8.71	88,793.00
<i>London Stock Exchange Group PLC</i>	3,471.08	35.74	7.78	10.17	42,407.79
<i>Vinci SA</i>	2,483.16	22.38	5.57	3.65	63,168.56
<i>Barclays PLC</i>	1,940.14	1,017.46	4.35	5.86	34,184.14
<i>Qatar Islamic Bank QPSC</i>	1,838.77	405.70	4.12	17.17	11,262.88
<i>HK Electric Investments Ltd</i>	1,733.57	1,758.40	3.89	19.90	8,833.92
<i>Tiffany & Co</i>	1,554.41	11.82	3.48	9.74	15,917.27
<i>Credit Suisse Group AG</i>	1,464.73	133.22	3.28	5.44	30,970.99
<i>Masraf Al Rayan QPSC</i>	1,381.87	1,189.57	3.10	15.86	9,107.14
<i>Hapag Lloyd AG</i>	1,349.60	21.62	3.03	12.30	18,631.68
<i>J Sainsbury PLC</i>	1,201.70	481.75	2.69	21.66	6,836.26
<i>Agricultural Bank of China Ltd</i>	1,078.25	2,448.86	2.42	7.97	165,872.00
<i>Ahli Bank QPSC</i>	1,034.29	1,159.09	2.32	47.71	2,236.09
<i>Inmobiliaria Colonial SOCIMI SA</i>	873.55	102.69	1.96	20.21	4,961.11
<i>Commercial Bank PSQC</i>	804.10	679.47	1.80	16.79	4,870.05
<i>Accor SA</i>	802.25	29.51	1.80	11.29	9,467.48
<i>Royal Dutch Shell PLC</i>	719.12	33.72	1.61	0.91	144,526.18
<i>Quantumscape Corp</i>	672.48	14.31	1.51	7.55	25,638.91
<i>Qatar International Islamic Bank QPSC</i>	668.96	251.55	1.50	16.62	3,805.01
<i>WuXi AppTec Co Ltd</i>	574.59	38.79	1.29	12.64	45,316.88
<i>Pavilion Real Estate Investment Trust</i>	421.30	1,008.90	0.94	33.13	1,230.81
<i>EDP Energias de Portugal SA</i>	407.36	82.87	0.91	2.09	23,781.63
<i>Lagardere SCA</i>	372.27	17.09	0.83	13.03	3,262.01
<i>Severn Trent PLC</i>	349.51	11.60	0.78	4.86	7,491.23
<i>Doha Bank QPSC</i>	339.91	531.68	0.76	17.15	2,027.23
<i>Empire State Realty Trust Inc</i>	267.86	29.89	0.60	17.49	1,630.19
<i>Luckin Coffee Inc</i>	105.59	3.25	0.24	3.31	2,377.86
<i>COIMA RES SpA SIHQ</i>	103.60	14.45	0.23	40.02	270.16
<i>Apollo Commercial Real Estate Finance Inc</i>	85.52	10.49	0.19	7.48	1,623.23
<i>AsiaInfo Technologies Ltd</i>	81.48	52.02	0.18	5.68	1,315.96
<i>Shanghai Henlius Biotech Inc</i>	78.85	14.21	0.18	8.70	3,014.74

<i>Adecoagro SA</i>	63.77	15.98	0.14	13.62	741.58
<i>ASaffa Foods SAOG</i>	61.99	39.90	0.14	33.25	171.57
<i>Airtel Africa PLC</i>	56.54	134.73	0.13	3.58	3,917.49
<i>Widam Food Company QPSC</i>	50.24	29.18	0.11	16.21	304.17
<i>Baladna QPSC</i>	48.33	95.05	0.11	5.00	949.46
<i>Banyan Tree Holdings Ltd</i>	36.93	205.87	0.08	24.47	171.41
<i>DXB Entertainments PJSC</i>	28.46	878.39	0.06	10.98	261.38
<i>Reckitt Benckiser Group PLC</i>	20.92	0.21	0.05	0.03	62,132.92
<i>Qatar Oman Investment Company QPSC</i>	14.16	63.00	0.03	20.00	76.33
<i>Gulf Investment Fund PLC</i>	13.69	10.78	0.03	11.66	128.52
<i>Melrose Industries PLC</i>	2.29	1.54	0.01	0.03	11,167.91

Source: Thomson Reuters (2021)

5.4. Non-resource-Abundant SWFs Performance - The Case of GIC

In order to demonstrate whether the resource base of the fund motivated particular mandates or investment strategies and establish a better understanding of the variables affecting the performance of the funds, this section offers an analysis of a non-resource-abundant SWF as a point of comparison with that of a resource-abundant SWF such as Qatar's. For this purpose, the case of Singapore's SWF, Government of Singapore Investment Corporation (GIC), has been selected as it is considered relevant to the case of Qatar. What makes Singapore an ideal example to analyse alongside Qatar is the similarities between the two states, despite the differences in their origins of wealth generation. Qatar and Singapore are both small open economies with similar macroeconomic, geographic, and economic features. Small open economies have the largest SWFs but are also more susceptible to global price fluctuations, making wealth management of critical significance to them. Similar to how oil-abundant states can use their SWFs to stabilise macroeconomic challenges regarding oil price fluctuations, Singapore's GIC was established to mitigate the effects of global inflation, as trade-dependent economies are susceptible to upheavals in the global financial economy. The aim of this analysis is to explore whether institutional structures such as SWFs respond differently if they are founded by an oil-abundant state in relation to a non-oil state.

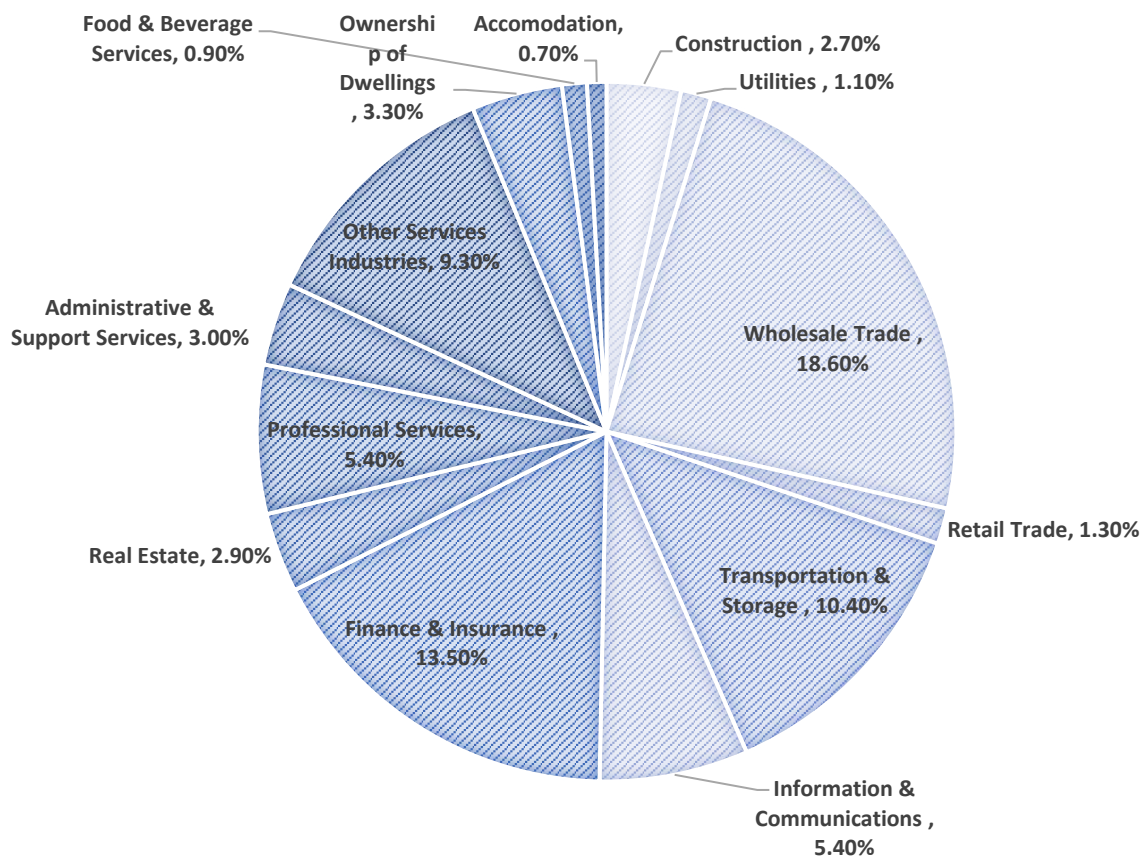
Singapore has transitioned from a developing to a developed state in the past fifty years. The country's GDP growth has been one of the world's highest, with an average of 7.7% since its independence (World Bank, 2019b). Today, Singapore is one of the highest-income economies in the world, with a GDP of US\$397 billion per capita (World Bank, 2021c). According to the Human Development Index (2021a), Singapore is ranked 12 out of 191 countries, with a score of 0.939, considered remarkably high in human development. Transparency International (2022), which publishes the Corruption Perception Index annually, ranks Singapore as number 5 out of 180, scoring of 83 out of 100.

After gaining independence in 1965, Singapore's government improved necessary foundational sectors such as the transport, industrial and housing systems. Despite its lack of natural resources, Singapore has had its fair share of challenges and proved itself during challenging economic times; it successfully weathered the 1997 Asian financial crisis. The

twenty-first century situates Singapore’s economy as one of the strongest and most stable internationally, with no foreign debt, high government revenue and a steady budget surplus.

The manufacturing sector is the primary growth driver, and for such the state is a trade-based economy. The services sector is also an important sector of the economy that has differentiated Singapore as a high-value-added economy, giving Singapore a reputation as one of the most advanced economies globally. Figure 5.11 depicts a breakdown of the economy’s composition; its largest industry is the manufacturing sector, which includes electronics, chemicals, and biomedical sciences, contributing to 21% of the country’s annual GDP. The second most prevalent sector is the services industry which includes business, accommodation, food, and other services, where 28% of economic activity stems from the services sector. Over 200 banks back its finance and insurance industry causing Singapore to be viewed as a hub in the world of global financial services. This is mainly due to its stable economic growth, ease of doing business environment and stable political background.

Figure 5.11: A Breakdown of the Singaporean Economic Structure According to Their GDP Contribution



Source: Department of Statistics Singapore (2020)

The Singapore government's total revenue was at US\$67 billion as of 2020, a significant decrease of US\$7 billion from the consistent average of US\$74 billion for the previous three years (Table 5.11). The bulk of revenues is from taxes comprising nine different streams of taxes estimated at approximately US\$55 billion, nearly 82% of government revenues. Government expenditure is heavily weighted on social development, security, and external relations. Undoubtedly, 2020 was a challenging year for Singapore's public budget, which could be attributed to the global pandemic which put the entire world at a halt. Despite the deficit, expenditure on economic development increased in 2020 compared to previous years. Thus, the importance of economic development is at the core of Singapore's governance.

Table 5.11: Singapore Public Budget for the Years 2017–2020

<i>Budget (US\$ million)</i>	<i>2017</i>	<i>2018</i>	<i>2019</i>	<i>2020</i>
<i>Total Revenue</i>	75,815.70	73,738.30	74,273.80	67,376.50
<i>Corporate Income Tax</i>	14,944.00	16,032.00	16,731.90	16,111.90
<i>Personal Income Tax</i>	10,724.00	11,705.80	12,367.70	12,747.80
<i>Withholding Tax</i>	1,531.60	1,589.90	1,637.30	1,618.30
<i>Statutory Boards' Contribution</i>	4,865.80	1,490.50	1,798.10	2,519.10
<i>Assets Taxes</i>	4,439.70	4,649.10	4,761.70	3,127.80
<i>Custom and Excise Taxes</i>	3,132.90	3,075.00	3,263.50	3,581.80
<i>Goods and Services Tax</i>	10,959.50	11,137.10	11,163.70	10,345.70
<i>Motor Vehicle Taxes</i>	2,152.50	2,623.40	2,418.90	2,133.10
<i>Betting Taxes</i>	2,688.20	2,663.90	2,619.90	1,721.70
<i>Stamp Duty</i>	4,905.10	4,606.90	4,199.00	3,895.70
<i>Other Taxes</i>	6,019.30	6,628.90	6,683.20	3,605.60
<i>Vehicle Quota Premiums</i>	5,796.10	3,616.40	2,865.40	2,297.20
<i>Fees and Charges (Excluding Vehicle Quota Premiums)</i>	3,279.10	3,489.70	3,409.40	3,181.40
<i>Others</i>	377.80	429.60	353.90	489.40
<i>Total Expenditure</i>	73,556.20	77,823.90	75,337.20	86,365.80
<i>Social Development</i>	36,468.10	35,819.70	36,607.30	44,516.30
<i>Security & External Relations</i>	20,462.50	21,410.70	21,276.40	20,523.90
<i>Economic Development</i>	13,871.90	17,780.90	14,374.00	18,720.60
<i>Government Administration</i>	2,753.80	2,812.60	3,079.50	2,605.00
<i>Primary Surplus/Deficit</i>	2,259.40	-4,085.70	-1,063.50	-18,989.30
<i>Special Transfers</i>	6,122.40	8,988.60	15,129.40	50,821.70
<i>Special Transfers Excluding Top-ups to Endowment and Trust Funds</i>	2,112.40	1,688.60	1,561.40	33,501.70
<i>Basic Surplus/Deficit</i>	147.00	-5,774.30	-2,624.90	-52,491.00
<i>Top-ups to Endowment and Trust Funds</i>	4,010.00	7,300.00	13,568.00	17,320.00
<i>Net Investment Returns Contribution</i>	14,723.90	16,412.70	17,037.50	18,244.00
<i>Overall Budget Surplus/Deficit</i>	10,861.00	3,338.50	844.70	-51,567.00

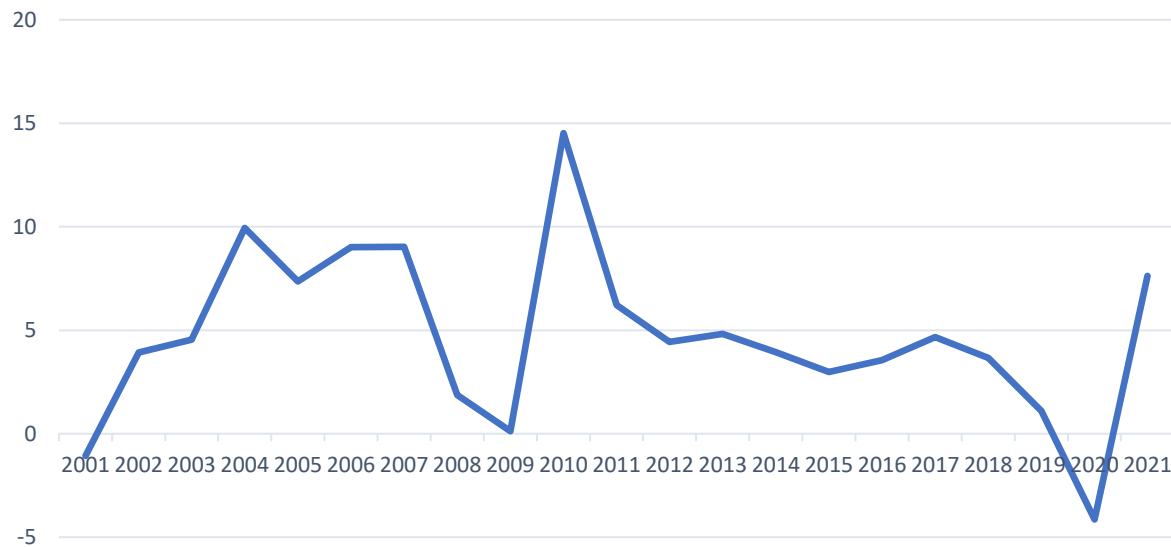
Source: Department of Statistics Singapore (2020)

Singapore was the first state in Asia to establish a non-commodity SWF: Temasek, which was established in 1974, was a holding company with equity acquisitions both domestically and internationally, and the Government of Singapore Investment Corporation, which was established in 1981 to invest its assets only abroad. Temasek is fundamentally a Singaporean holding company, while GIC is a fund management company. Both funds invest internationally and do not have a particular focus on domestic investments only. This study mainly focuses on GIC as it provides a relevant comparative case vis-à-vis the QIA; due to the structure and dynamics of the two funds in terms of their investment aims, asset allocation, and nature.

Singapore, one of the Four Asian Tigers (see Vu, 2011), has outperformed its peers in terms of economic growth and GDP per capita (PPP) at US\$116,486, ranked 2 out of 187 countries by the World Bank (2021c). The state has transformed and developed the domestic economy remarkably between 1965 and 2008, with consistent growth rates of 1.5–2 percentage points per year (Vu, 2011). Singapore's growth was achieved in phases. The first one was between 1965–1990. This period was characterised by export-led industrialisation and governmental efforts to accumulate capital to stimulate quantitative growth rapidly. Foreign direct investment was one of the primary growth drivers, creating employment opportunities and expanding productive capacity. Amid this growth, in the 1970s, the government introduced high-tech manufacturing into their export mix, introducing high-value-added services to the Singaporean economy. The second phase began post-1990, driven by the government's efforts to transform Singapore into a developed country strategically, and thus focussed on qualitative development. Nevertheless, throughout these years, Singapore was hit by significant financial crises, namely, the Asian financial crisis of 1997 and the global financial crisis of 2008, which hit the economy badly, the effects of which were especially pronounced in 2009. However, in 2010, GDP growth skyrocketed to its ultimate peak (Figure 5.12). Three distinctive features are evident in Singapore: the government's interventionist policies to promote economic growth, its extreme vulnerability to external shocks – which can adversely affect the economy – and its resilience, its ability to recover robustly after a crisis (Vu, 2011: 5). The resilient nature of Singapore is similar to the resilience that Qatar demonstrated during the past blockade where the challenge was both political and economic. Just before Singapore embarked on the vast development route in 1965, the island was nothing more than a struggling economy. When Singapore was severely hit during the financial crisis, oil-rich states, such as Qatar, reached annual growth rates of 17.6% in 2008 and 11.9% in 2009. However, the global pandemic of

2020 hit all states regardless of resources, although it was more pronounced in Singapore with -4.1% as opposed to -3.6% in Qatar.

Figure 5.12: Singapore's Annual GDP Growth From 2001–2021

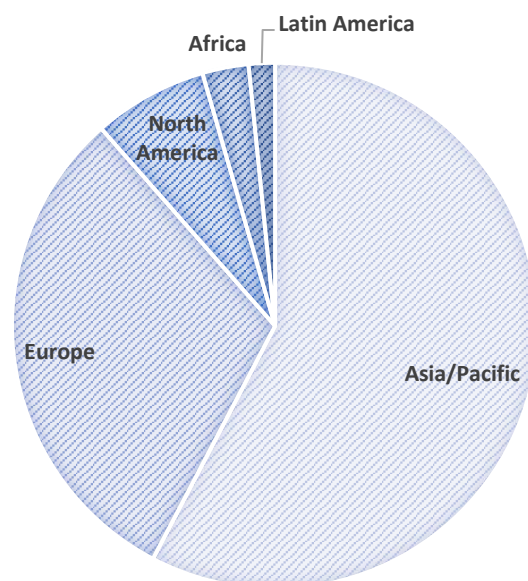


Source: World Bank (2021d)

Singapore's economy is mainly trade-dependent, highly volatile, and vulnerable to global financial instabilities. In 2019, Singapore's Ministry of Trade and Industry reflected the state of the economy, which was shrinking by 3.4% quarter on quarter in the second quarter of 2019. Such low growth rates seem to mirror the growth rates of the past decade, leading to trade tensions that disrupt supply chains (Shane, 2019). The second quarter of 2019 marks the sharpest quarter decline since 2012 and the slowest growth rate since 2009. This decrease signals a decrease in manufacturing that is likely to affect the rest of Asia. For Singapore, it will particularly influence engineering industries and electronics, which have decreased by 3.8% consecutively, accompanied by growth forecasts that have been downgraded twice (Shane, 2019). The Singaporean dollar has been hit by the data releases of an economic downturn, which is evident in the currency rate versus the US dollar. The Monetary Authority of Singapore manages the float of the Singaporean dollar while adopting a market-oriented approach where the currency's value is weighted against a basket of currencies. Trade-dependent economies are hit hard by trade upheavals or changes in the global financial economy.

Singapore's rapidly growing foreign reserves led to the establishment of the GIC in 1981. The bulk of foreign reserves was channelled into the fund to achieve long-term returns and mitigate the effects of global inflation. The purpose of the fund is to 'invest for the long term to preserve and enhance the international purchasing power of the funds placed under... management' (GIC, 2018a). The investment horizon is over a 20-year period. The SWF is seen as a critical source of wealth for the future of Singapore, with three main functions: first, it is a valuable buffer and shock absorber during financial busts; second, it improves the stability of the Singaporean dollar, which as a result increases investor confidence; and third, the fund's revenues enhance government expenditure (GIC, 2018a). The portfolio distribution for GIC (2017) is as follows: it invests 35% in nominal bonds and cash, 27% in developed market equities, 17% in emerging market equities, 9% in private equity, 7% in real estate and 5% in inflation-linked bonds; and has a wide geographical distribution of portfolios but is heavily present in Asia/Pacific and the European markets (Figure 5.13).

Figure 5.13: The Geographical Distribution of the GIC Portfolio



Source: Thomson Reuters (2020)

According to Lim Chow Kiat, the Chief Investment Officer of GIC, the fund's financial assets and investment portfolio are managed 80% in-house and 20% by external asset managers, giving the fund the ability to invest in a broad spectrum of assets in the global market and access to niche strategies (Adamson, 2013). Managing resources in-house allows the SWF to reap its cost-benefits, saving on costs and capitalising on economies of scale. This is echoed in

other funds as well. For example, according to Adamson (2013), Norway's NBIM has reduced its need for external asset managers: from investing 13.2% of the fund in external managers in 2008 to 3.8% in 2012. The fund often employs external expertise to enhance geographical exposure to market sectors in which the fund lacks knowledge. Arguably, it is more complex for GIC to rely only on in-house capabilities than NBIM. Compared with GIC, the investment spectrum for the Norwegian fund is relatively simple, investing heavily in stocks and bonds. Following the 2008 financial crisis, GIC altered its investment technique from investing in private equity funds to investing those stakes in direct investments (Adamson, 2013).

The modification in the fund's investment technique could be attributed to the significant investment losses that occurred at the height of the global financial crisis. In 2006 GIC invested US\$200 million in Tishman Speyer Properties, the largest apartment complex in Manhattan and lost the entirety of the deal (Bagli & Haughney, 2010). By comparison, in 2009, GIC sold half of its holdings in its US\$6.9 billion stake in Citigroup, gaining a profit of US\$1.6 billion (Carew, Venkat, & Paris, 2009). According to Singapore's Ministry of Finance (2011), 'GIC's performance has to be measured on the basis of its overall portfolio' and not be based on gains and losses of individual investments.

The GIC is a member of the IFSWF and voluntarily follows the Santiago Principles to exchange dialogue and an understanding of SWF activities. The Santiago Principles promote good governance along with investment practices that are seen to improve transparency. The IFSWF (2011, 43) offers the responses of the SWFs to the helpfulness of the Santiago Principles in guiding their operations and investment practices. The GIC stated, 'We believe the [Santiago Principles] is a good framework for SWFs and it helps to enhance the understanding of SWFs as financially oriented entities'. GIC goes on to further restate that the Santiago Principles have given SWFs a 'common language' based on financial outlook; however, it does not substitute for how it undertakes its investments and deals with third parties (IFSWF, 2011: 41).

Further, to achieve a strategic asset allocation, the Board of Directors approves GIC's policy portfolio and investment activities while defining the asset classes' allocation (IFSWF, 2011). This aims to achieve the investment return rate set within the risk orientation determined by the fund. The investment decisions undertaken are based on a set guideline of limits that ensure compliance with the fund's mandate. According to IFSWF (2011), GIC has an independent risk and performance management department that monitors the fund's performance and asset

exposure against defined limits. The GIC is prohibited from investing in states where the UN Security Council has imposed sanctions.

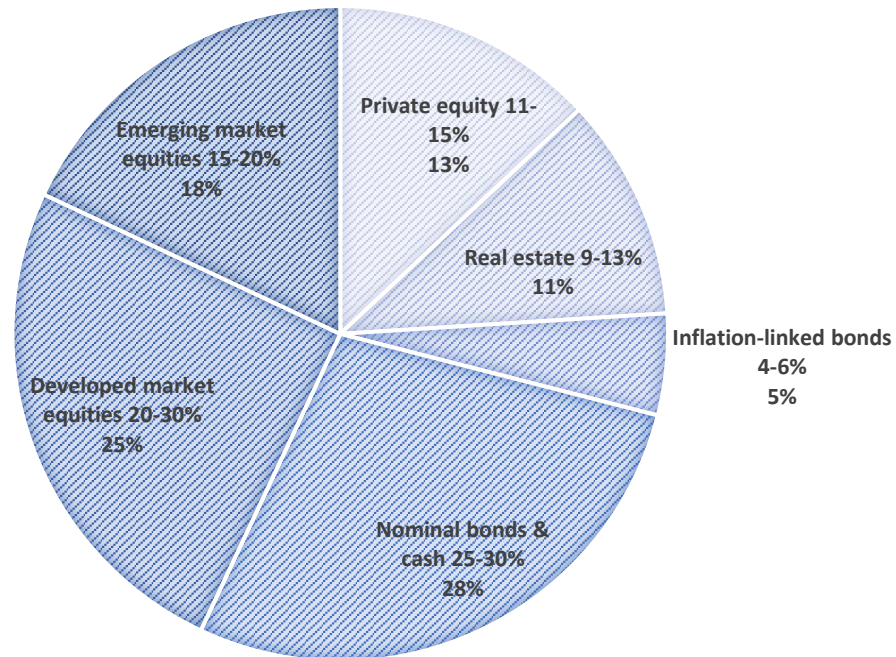
The GIC does not disclose its fund performance. However, in 2008 it disclosed in its annual report how it had achieved its long-term investment objectives, along with a 20-year rate of return (IFSWF, 2011). The investment decisions are undertaken internally. However, external technocratic expertise is recruited in order to add value to the portfolio where needed. In 2017 GIC achieved a 20-year annualised rate of return of 3.7% and a nominal rate of return of 5.1% for the 5-year period, 4.3% for the 10-year period and 5.7% for the 20-year period (GIC, 2017). The returns of GIC (2018a) supplement the state's annual budget through the Net Investment Returns Contribution, which has allowed for the transformation of Singapore into an innovative economy, focused on the long-term orientation of investments along with fiscal sustainability. According to Singapore's Ministry of Finance (2011), revealing the exact amount of financial reserves under management is against Singapore's national interest, as this would make it easier to attack the Singaporean dollar during periods of instability – 'our reserves are a strategic asset... for a small country with no natural resources or other assets. It would be unwise to reveal the exact amount at our disposal for defending our currency, or for use in an emergency'.

The Ministry of Finance represents the government of Singapore. However, it does not direct GIC's investment decisions; the GIC Board is responsible for the fund's performance. The GIC is a Fifth Schedule company accountable to the President of Singapore; the constitution obliges him to acquire knowledge about the fund to preserve the state's reserves (GIC, 2018b). The President appoints an Auditor-General, responsible for submitting the annual report to the President and Parliament on the fund's behalf (GIC, 2018c).

In 2013, the GIC implemented a new investment framework focusing on long-term returns rather than short-term volatility; this means undertaking higher-risk investments (GIC, 2013a). The new framework structures investments under three categories of long-term performance:

- A Policy Portfolio, which is central to the investment framework as it defines the fund's strategic asset allocation, simplifying the past approach that consisted of thirteen asset classes to six core asset classes (Figure 5.14).

Figure 5.14: The Policy Portfolio of GIC



Source: GIC, 2013b: 24

- An Active Portfolio, which provides the SWF with a dynamic approach, was developed after the fund's experience, post-global financial crisis. According to GIC's Chief Economist Leslie Teo, this is 'designed to beat the Policy Portfolio via skill-based strategies' (Yanqin, 2013). Thus, the investment framework has a level of flexibility that allows the fund to invest away from the policy portfolio, given that the investment adds value to the fund and outperforms the asset classes in the policy portfolio. This is made possible by taking from the equity allocation set for the policy portfolio and managing the assets in the active portfolio dynamic.
- A Reference Portfolio, which defines the risk orientation of investments, based on a balance of 65% global equity and 35% global bond indices (GIC, 2013a).

The new framework shows the development of GIC as an SWF and the lessons and experiences they have gained, which have in effect altered the fund's institutional architecture. An economist from one of the largest investment banks in the region – Commerce International Merchant Bankers, noted that the new approach that GIC has undertaken suggests that through experience, the fund is willing to take risks rather than be conservative based on the fund's accountability within the country's political environment (Yanqin, 2013).

In 2013, GIC (2013b: 10) reported that its 5-year performance was at 2.6%, lower than the global portfolio returns of 3.4% (Table 5.12). The report stated that GIC ‘had been affected by the weaker performance of alternative asset classes like real estate and infrastructure, which were slower to recover after the 2008 Global Financial Crisis’. However, although illiquid assets underperform in the short run, the fund is interested in the long-run return (GIC, 2013b: 12).

Table 5.12: Investment Performance of GIC Over 20 Years for the Year 2013

Time period	Annualised nominal rates of return for 31 March 2013		Annualised volatility for 31 March 2013	
	GIC portfolio	Global portfolio 65:35	GIC portfolio	Global portfolio 65:35
5-year	2.6%	3.4%	12.8%	15.3%
10-year	8.8%	8.6%	10.3%	11.9%
20-year	6.5%	7.2%	9.1%	10.9%

Source: GIC, 2013b: 11

Introducing a 65:35 reference portfolio into the new framework reflects a different take on investments and a higher risk orientation. The GIC’s (2013a) 20-year annualised real return on its portfolios for the year 2013 was 4%, in comparison to 3.9% in 2012; this is evidence of an enhancement in portfolio performance averaging a return of 4% per year further to having insulated the portfolio against global inflation. Table 5.12 summarises the rate of return of GIC and demonstrates that before the 10-year period, the fund had a much lower risk profile. Consequently, GIC’s performance during the 10-year period is comparable and even exceeds the global portfolio: ‘investments in public emerging markets and alternative asset classes’ are factors behind the improved rates of return (GIC, 2013b: 10). The Chief Investment Officer of GIC noted that the new framework defines risks, objectives and return drivers, which allow for GIC to deliver steady returns despite global inflation (GIC, 2013a). The President of GIC, Lim Siong Guan, notes that the new investment framework shows an ‘evolving investment approach’ aiming to optimise the investment model in the face of a changing global economy (GIC, 2013a).

The 2019 investment performance provides a demonstration of the efficiency of the investment framework introduced in 2013. The aim of the newly introduced framework was to concentrate on the long-term returns from investments and dismiss any short-term fluctuations in returns. Analysing the 2019 performance provides an overview of the 5-year nominal return since the induction of the newly proposed framework. According to the annual report published by GIC

(2019), the 5-year portfolio return was 4.9% per annum. However, the improvement in the global economy and supportive monetary policies were the prime causes of the enhanced market valuations. Market adjustments occurred due to forecasts of a contraction in liquidity globally. The 20-year real return per annum was 3.4%; the 10-year nominal return, as presented in Table 5.13, includes a sharp recovery of 8.6% following the stock market revival post-2008 global financial crisis. Another cause of the asset market's robust performance is the exceptional global decline in interest rates and the enhanced liquidity.

Table 5.13: Investment Performance of GIC Over 20 Years for the Year 2019

Time period	Annualised nominal rates of return and volatility of the GIC Portfolio for 31 March 2019		Annualised nominal rates of return and volatility of the Reference Portfolio for 31 March 2019	
	Nominal return	Volatility	Nominal return 65:35	Volatility
5-year	4.9%	6.2%	5.2%	10.6%
10-year	8.6%	8.4%	9.3%	9.9%
20-year	5.5%	8.9%	5.2%	7.7%

Source: GIC, 2019:15-16

The corresponding Reference Portfolio is not considered a performance benchmark, 'rather, it characterises the risk the Client is prepared for GIC to take in generating long-term investment returns' (GIC, 2019:16). This risk exposure is highly dependent on the global market condition and can vary accordingly. For example, since 2013, GIC has lowered their portfolios risk exposure by decreasing its allocation to developed market equities amid an uncertain global market economy (GIC, 2019:16). Table 5.13 includes the rate of return for the Reference Portfolio and the corresponding volatility. It is evident from the figures that over the three study periods, the GIC portfolio has lower volatility than the equivalent Reference Portfolio volatility, primarily due to its highly diversified asset allocation. Despite its limited risk exposure, the GIC Portfolio has demonstrated robust returns over the three study periods.

Table 5.14: Break Down of GIC's Total Value Held in Invested Industries

<i>Industries</i>	<i>Value held in million US\$</i>	<i>Number of securities held</i>
<i>Energy</i>	4,773.29	17
<i>Basic Materials</i>	2,956.72	31
<i>Industrials</i>	6,974.46	61
<i>Consumer Cyclical</i>	5,886.40	63
<i>Consumer Non-Cyclicals</i>	7,634.15	42
<i>Financials</i>	18,393.52	104
<i>Healthcare</i>	4,656.76	21
<i>Technology</i>	13,417.66	48
<i>Telecommunications Services</i>	2,962.80	12
<i>Utilities</i>	932.18	16
Total	68,587.93	415

Source: Thomson Reuters

The portfolio distribution of GIC is diverse, along with the geographical distribution of investments. Table 5.14 shows GIC's investments categorised by industry and the number of securities held. The securities held are diversified. However, significant shares of securities are held in financials, which is the same as QIA's investment concentration. The GIC's total value held in financials reflects the concentration of investments in the industry with US\$18,393.52 million. Table 5.15 presents the top ten GIC holdings and the top investments in terms of portfolio percentage value. The investments are diversified; however, large shares of investments are concentrated in financials. The largest investment in terms of portfolio percentage is in technology, with 8.33%. The remainder of top-owned holdings is between 2–1%. The top industries in terms of portfolio percentage value are financials, technology, industrials, consumer non-cyclicals, healthcare, energy, and telecommunications services.

Singapore's portfolio allocations are diversified, which is essential to mitigate the effects of global inflation. To complement this their risk exposure is dependent on the global market condition and varies accordingly. Although GIC is conservative in terms of risk exposure, after introducing a 65:35 reference portfolio into the 2013 framework, the reference required a higher risk orientation. The new framework shows the development of GIC as an SWF and the fund's maturity in understanding the global market and altering its institutional architecture accordingly – an evolving investment approach focused on the fund's long-term returns rather than on short-term fluctuations. This approach is crucial because Singapore is a trade-dependent economy and is sensitive to inflation and global market imbalances. When oil-rich states SWFs were bailing out weakened institutions during the 2008 global financial crisis, non-commodity-based SWFs were not performing as well. Singapore's SWF incurred significant losses during the global financial crisis. In fact, the framework of 2013 structures investments under three categories, of which one – active portfolio – was developed post-global

financial crisis. This allowed for investment flexibility away from the policy portfolio, given that the investments undertaken, added value to the fund.

Table 5.15: Top Ten GIC Holdings

	 Holding name	 Portfolio percentage value	 Number of shares owned (millions)	 Industry
1	Taiwan Semiconductor Manufacturing Co Ltd	8.33%	691.15	Technology
2	Housing Development Finance Corporation Ltd	2.45%	60.16	Financials
3	Atlantia SpA	2.44%	67.19	Industrials
4	Allergan plc	2.18%	8.56	Healthcare
5	Reliance Industries Ltd	2.18%	82.39	Energy
6	Synchrony Financial	1.90%	55.47	Financials
7	Bharti Airtel Ltd	1.87%	247.35	Telecommunications Services
8	Bajaj Finance Ltd	1.80%	21.57	Financials
9	Budweiser Brewing Company	1.52%	290.34	Consumer Non-Cyclicals
10	Prudential PLC	1.49%	52.78	Financials

Source: Thomson Reuters (2019)

The GIC is seen as a critical source of wealth for the future of Singapore. As in the case of oil-rich states where SWFs can be used as a buffer in oil price volatility, non-commodity-based funds also function as a buffer and shock absorber during financial busts. The challenges of global inflation that non-commodity-based states are susceptible to are equivalent to oil price volatility, which the resource curse theory attributes to malfunctioning economic performance on the part of oil-rich states. Non-commodity states have issues of their own, where arguably, SWFs may incur more from global market imbalances than oil-rich states' SWFs. The global pandemic hit Singapore's economy's GDP growth much harder than it did Qatar. One of the GIC's functions is to improve the stability of the Singaporean dollar, whereby investor confidence is maintained.

The following section analyses the performance indicators of the two funds that represent the complex investment dynamics of SWFs. Indices of best practice and the scores for the funds are analysed along with limitations of well-known scoreboards used to assess best practice. Needless to say, although best practice is often quantified in the form of indices, investment performance is much more complex and, in some cases, unquantifiable. The true performance of the funds is portrayed during times of economic difficulties. Resilient economies backed up by their SWFs indicate the SWF's performance much more than any index can capture. Comparing the performance indicators of QIA and GIC can shed light on whether the source of the fund can have an impact on performance and investment allocations.

5.5. The Macroeconomics of QIA and GIC

Thus far, it is unclear why SWFs adopt different investment strategies and because SWFs' behaviour has been central to the construction of economic policy reforms, it is crucial to deconstruct differences in investment strategies, as well as the funds' reactions to the international financial market. This will allow for an improved understanding of the SWFs and whether differences exist between a commodity-based and a non-commodity-based SWF.

By examining the SWFs of Singapore and Qatar, the study sheds light on two fundamental aspects. First, it assesses an oil-rich state's SWF and draws lessons from a non-commodity-based SWF to understand whether investment allocation and strategies differ and how the funds react to economic challenges domestically. Second, the study addresses this within the broader theoretical framework of resource curse theory and the negative assumptions it attaches to resource-rich states and economic development and governance. Similar to the issues that oil-rich states experience from oil price volatility, non-commodity states have challenges of their own; Singapore, a trade-dependent economy, is sensitive to inflationary pressures in the global financial economy. Both states are small open economies and in terms of the relative size of their SWFs compared to GDP. Small open economies occupy the top rankings in terms of fund sizes globally (Table 5.16). Small open economies, in particular, are interesting to analyse as the constraints they face due to limited domestic market exposure means they are more susceptible to volatility than larger economies (Braunstein, 2017: 49).

Table 5.16: Rankings of Small Open Economies SWFs by Total Assets

Rank	State	SWF	Size US\$- Billion	Source of funding
2	Norway	Government Pension Fund- Global	1,259.629	Oil
3	United Arab Emirates	Abu Dhabi Investment Authority	790	Oil
4	Kuwait	Kuwait Investment Authority	750	Oil
5	Singapore	Government Investment Corporation Private Limited	690	Foreign exchange reserves
8	Singapore	Temasek Holdings	496.593	Fiscal appropriation
9	Qatar	Qatar Investment Authority	475	Oil
11	United Arab Emirates	Investment Corporation of Dubai	305	Oil

Source: SWFI (2023)

Small open economies do not simply account for over half of the twenty largest SWFs globally but form the largest share of economic indicators relative to their SWF. For example, QIA’s asset size is equivalent to 265% of Qatar’s GDP (Table 5.17). While this is not the case for larger economies where the fund size does not surpass GDP, for example, the Chinese Investment Corporation, the largest SWF in the world, with an asset size of US\$1.35 trillion, is only equivalent to 7% of China’s GDP³.

Table 5.17: Size of SWF as part of GDP

Small open economy	SWF	Assets US\$- Billion	Origin	SWF as part of GDP %
Qatar	QIA	475	Oil & Gas	265
Singapore	GIC	690	Non-Commodity	173

Source: SWFI (2023), World Bank (2021b; c)

Qatar and Singapore, however, differ substantially in terms of currency policy choices. While Qatar employs a fixed exchange rate regime to prevent currency appreciation and its accompanying problems – the Qatari riyal is pegged to the US dollar at a fixed exchange rate (since 2001), which requires sufficient foreign asset reserves to maintain the fixed exchange rate. According to the IMF (2019b), pegging to the US dollar provides a transparent and credible monetary anchor. The Singapore Dollar has a currency stabilisation hedge. However, Braunstein (2017: 51) states, ‘Unlike SWFs in commodity-exporting countries... Singapore arose from years of conservative fiscal policy, internal fund transfers, and foreign exchange interventions’. Singapore was pegged to the US dollar in the past but is currently on a managed float instead of a free float (Monetary Authority of Singapore, 2011). While the economy in Qatar is not as sensitive to upheavals or changes in the global financial economy, Singapore is more likely to be affected by inflationary pressures. In fact, the GIC was established in order to channel foreign reserves with the prospects of achieving long-term returns and mitigating the effects of global inflation. One of the three functions of GIC is to improve the stability of the Singaporean dollar. Despite differences in fiscal policy, the two SWFs ultimately aim to provide for an unknown future while mitigating volatility.

The characteristics of the two SWFs are in fact very similar (Table 5.18). The ownership and reporting structure demonstrates that they are both owned by the government and report to a Ministry. The objectives are similar in that they both invest for the future, except QIA is

³ Computed by using data from SWFI (2023) and World Bank (2021e)

concerned with inter-generational wealth transfer, while GIC has long-term investment objectives for wealth enhancement. The allocation of investment differs, Singapore has two funds, as discussed earlier, and GIC is responsible for international investments while the other fund only invests domestically. However, Qatar has only one SWF and so invests domestically and internationally.

Table 5.18: Characteristics of Qatar and Singapore SWF

	GIC	QIA
Ownership and reporting structure	Owned by the Government and accountable to the Ministry of Finance	Owned by the Government and reports to the Supreme Council for Economic Affairs and Investments, the highest decision-making body concerning Energy, Investment and Economy in Qatar
Nature of the fund	Sovereign Wealth Fund	Sovereign Wealth Fund
Objective	Wealth enhancement, long-term investment objectives	Savings fund, inter-generational wealth transfer
Allocation	Internationally	Domestically and internationally
Time Horizon of investment	Long-term portfolio policy, medium-term asset allocation and alternative assets	Long-term investment time horizon

Source: QIA (2019), GIC (2019)

According to the SWFI, two key themes have emerged over the last few years: ‘the moves toward venture capital and direct international investments’ (Sergie, 2018). An investment category associated with QIA’s investments is trophy investments, a prominent valuable asset class, along with infrastructure, real estate investments and bank shares. The fund, however, has been reluctant to invest in venture capital and technology investments until recently, with a \$100 million investment in Uber in late 2014 (Sergie, 2018). Domestically, QIA’s footprint is extensive, from Qatar’s stock market to stakes in Qatar National Bank, the biggest creditor in the region. The role of the Qatari SWF was challenged tremendously by the Saudi-led blockade, and thus, the SWF was expected to stave the domestic economy in the case of insolvency. Amid the blockade, Qatar’s SWF has invested in Russia’s oil giant Rosneft, which produces more oil than any company worldwide. Further, QIA has diversified its assets since the standoff and plans to establish a permanent office in San Francisco. The QIA has also invested a substantial sum of \$2.5 billion in Singapore Asia Square Tower, the largest office transaction in Singapore (Mahrotri & Martin, 2016).

Table 5.19: QIA's Largest Investment Shares

	<i>PERCENTAGE</i>	<i>MARKET VALUE (IN \$ BILLION)</i>
<i>Volkswagen AG (Common Share)</i>	16.99	\$8.70
<i>Glencore</i>	8.65	\$5.09
<i>Iberdrola</i>	8.57	\$3.93
<i>Barclays</i>	5.94	\$2.33
<i>Sainsbury</i>	21.88	\$2.00
<i>London Stock Exchange</i>	10.27	\$1.99

Source: Bloomberg (2018)

Similar to Qatar's blockade, Singapore has also experienced financial challenges as a state in the Asian financial crisis of 1997. Although Singapore had a solid macroeconomic foundation, its trading position exposed the state to financial difficulties. Singapore has a strict financial regulatory system and has not used its SWFs to bail companies. However, the QIA injected US\$3 billion into four large domestic banks, in order to keep them solvent (Braunstein, 2017: 47). In stark contrast, Singapore has avoided using its SWF to finance domestic challenges. This response is rather unexpected; Singapore has always been depicted as a conservative democracy with a tendency to support state interference. This interventionist approach means that Singapore's government has played a role in economic activity from diverse economic sectors, which scholars have documented (see Low, 2005; Braunstein, 2017). Therefore, the use of their SWF's wealth during periods of economic pressure would be an expected course of state economic policy. However, interestingly the observed response is not what is expected in contrast to Qatar, where the government plays a significant role in the economy and responds to challenges accordingly. The role that Singapore's government plays in responding to economic challenges as autonomous to state-owned institutions such as SWF is rather interesting to assess, as the SWF is expected to stimulate the economy.

The comparison of the roles of SWFs in two states under economic pressure paints a clear picture of how the difference in policy responses is not necessarily negative, as a state's response to economic pressure hinges on many domestic pressures and considerations. In Singapore, GIC does not own the funds that it manages, but simply manages them, similar to what a broker would do. Whether a state uses wealth from its SWF during periods of economic pressure depends on state dynamics and policies, very much like how resource wealth can be a blessing to resource-rich states if managed efficiently and how the challenges that non-commodity states face are similar. Qatar faces volatility from oil prices, but Singapore also faces volatility from capital-supply shocks. Regardless of the source of the volatility, the

SWF's role serves as an institutional vehicle that acts as a fiscal stabiliser. Table 5.20 compares resource and non-resource-based SWFs short- and long-term portfolios. Although they have different motivations, such as a precautionary savings mechanism for non-resource-based SWFs and stabilisation against the volatility of commodity prices in the case of resource-based SWFs the portfolio structure and investment horizons are identical. The long-term motivation of the portfolio reflects the true essence of SWFs, as the funds are long-term vehicles. For non-resource-based SWFs, it is to achieve a high return on excess foreign reserve assets; for resource-based SWFs, it is to establish an alternate source of wealth and fiscal income. Naturally, each SWF will have motivations depending on their state's needs. However, all other aspects, such as portfolio structure and horizon are the same for the two funds. The resource curse theory in turn would not consider the performance of resource-rich institutions to deliver in the same way their non-resource-rich counterparts, which has proved to be false in the case of SWFs. As discussed in the early chapters, channelling rents into an SWF avoids absorptive capacity problems and thus, allows wealth management to be undertaken most efficiently.

Table 5.20: Comparing Resource and Non-Resource-Based Sovereign Wealth Management

	Non-resource-based sovereign wealth	Resource-based sovereign wealth
Short-term portfolio		
Primary motivation	Precautionary savings against shocks (debt, trade, financial crises)	Stabilisation of volatile revenues and commodity price shocks
Management authority	Central bank	Ministry of Finance
Portfolio structure	Highly liquid, short-dated sovereign bonds and cash	Highly liquid, short-dated sovereign bonds and cash
Investment horizon	0 to 1 year	0 to 1 year
Long-term portfolio		
Primary motivation	Higher return on excess foreign reserve assets	Establishing an alternative source of wealth and fiscal income
Management authority	Sovereign wealth fund	Sovereign wealth fund
Portfolio structure	Diversified portfolio, with significant exposure to risk assets	Diversified portfolio, with significant exposure to risk assets
Investment horizon	1 to 10+ years	1 to 10+ years

Essentially, SWFs emerged in response to domestic challenges and monetary policy objectives, including macroeconomic stabilisation. The monetary policy includes clear aims and objectives and has developed substantially since the seventies; the era when the resource curse literature emerged; the monetary policy was fairly basic. It now includes mechanisms that ensure operational independence and policy frameworks that improve transparency (Alsweilem & Rietveld, 2018). The challenges that resource-rich economies experience, and

SWFs can address are the following four factors: first, volatility and procyclicality: resource-rich states experience volatility in their fiscal policy as a result of volatile revenue flows and tend to have procyclical fiscal policies. As a result, SWFs may contribute to the reduction in the volatility of government spending (Jacks, O'Rourke, & Williamson, 2011). Second, Dutch Disease leads to the inefficient allocation of factors of production (as discussed in Chapter Two). Third, weak institutions: establishing SWFs addresses the negative correlation between resource wealth and institutional quality (Mehlum, Moene, & Torvik, 2006; Robinson Torvik, & Verdier, 2006). Fourth, Intergenerational wealth transfer: in the investment of revenues from a finite source of wealth, resources are maintained in the long term. Further to the stated factors, resource curse theory attributes resource wealth to the prevalence of rent-seeking activities and low levels of long-term investments (Mehlum, Moene, & Torvik, 2006). An SWF contributes to limiting rent-seeking behaviour as the wealth is directed into an independent institutional arrangement that invests in a wide range of investments and follows a specific mandate.

5.5.1. Analysing SWFs' Performance Indicators

An improved understanding of SWFs' investment profile and asset allocation will be gained through analysing the economic impacts underpinning the purpose and effectiveness of SWFs. For example, investments with illiquid profiles could prove to be significant in the future but, under certain circumstances, could challenge the state's fiscal needs when sudden liquidity is needed. However, such vulnerabilities are only prevalent if the SWF is required to inject the domestic economy with immediate cash. The performance accrues of the SWF, both in scale and efficiency, is highly dependent on the mandate. Although SWF performance indicators do not fully capture the capacity of the SWF due to undisclosed information that would be more representative of the funds' true performance, they capture the essence of the funds in relation to one another and best practice.

As Chapter Three mentions, the Truman-Dawson scoreboard of best practices for SWFs is a composite index that includes four main categories: structure, management, governance, transparency, and accountability. The score derived for the four components is based on 33 indicators of behavioural obedience. Truman (2008, 6) bases the four components on the following: (1) the *structural* component is based on the fund's objectives and whether the fund is independent of the state's international reserves; (2) the *behaviour* component questions how

the fund manages its assets and scope and whether the fund incorporates leverage and derivatives; (3) the *governance* component of the fund looks at the role of management in decision making and if the fund has guidelines for corporate responsibility; and (4) *transparency and accountability* looks at investment activity and strategy, this includes publicly available information, reports and audits. Research has shown some evidence of a positive relationship between SWF performance and the Truman score (Dewenter et al., 2010: 278). Although the scoreboard does not account for investment performance, which could be due to its difficulty in quantifying performance, it provides a benchmark that quantifies SWF practices. For example, as a case in point, in 2015, Norway scored 98 in the Grand total index range, while Qatar scored 40 and Singapore scored 61 (Stone & Truman, 2016).

The institutional quality measurement followed by the Truman index listed most countries in the lower group when it first published the study. The low-scoring SWFs are classified as those with a score of less than 30 out of 100. The scoreboard is intended to provide a benchmark, and Stone and Truman (2016, 7) clarify that the scoreboard does not ‘define perfection’ as some elements are more applicable to some funds than others. These include the condition, background, and national cultural surroundings of the fund. They further insinuate that no SWF scores 100%, which is not the motivation behind the scoreboard, but it is a form of prototype measurement that would promote transparency and accountability. Furthermore, even the funds with the highest scores, Norway, for example, with a score of 98, exhibit less than full performance on some elements of the SWF scoreboard. Evaluating the scores from the most recent study, many of the SWFs’ institutional quality measurements increased substantially. Qatar, for example, was given a score of 9 in 2008, 17 in 2012 and 40 in 2016, an increase of nearly five-fold from the initial score. The average score of the 60 SWFs analysed was 62, which shows a substantial improvement in the scores over the past decade. Further, Stone and Truman (2016, 10) note, ‘one often hears that SWFs from emerging-market and developing countries are nontransparent, and consequently not as accountable... The scoreboard results refute this generalization’.

Table 5.21: Institutional Quality Measurements for QIA and GIC

SWFs	Truman Scoreboard				L-M Index		Resource Governance Index	
	2007	2009	2012	2015	2012	2019	2012	2017
QIA	14	15	17	40	5	5	26	43
GIC	45	60	61	61	6	7	n/a	n/a

Source: Stone and Truman (2016), National Resource Governance Institute (2017), SWFI (2019b)

Scholars have devised benchmarks to investigate the role of SWFs in the international economy. Although transparency is seen as an essential component in the Truman index, providing SWFs with a better score, scholars such as Ang (2010) do not consider transparency as necessary or sufficient. In fact, he gives the example of the Middle Eastern funds that are not transparent but have nevertheless succeeded in establishing vital funds that have endured various crises. Although the role of transparency, in this case, is not given as much importance, legitimacy is crucial and viewed as independent of transparency and can exist without the need for the fund to be transparent, so long as the fund is held accountable and reports to an authority.

Moreover, SWFs that are embedded in a rule-based fiscal framework demonstrate larger levels of transparency and subside from global pressures on the regulation of SWFs by recipient governments. However, if SWFs are embedded in a rule-based fiscal framework, their aims and objectives must be openly disclosed. In practice, QIA and GIC have clear aims and objectives that are openly communicated, contributing to the greater transparency of the funds. On another note, specific demands for transparency, such as the disclosure of investment details, policy functions and acquisition details, could damage the SWF due to rivalries that could interfere with the process. Therefore, certain forms of disclosures are limited, and that is understandable. Truman (2008, 12) states, ‘views differ on the desirability of quarterly financial reporting. Some argue that it promotes too much focus on short-term returns’. This is highly problematic as although the relative nature of SWF investments differs; many undertake large long-term investments that do not reflect future value in the present day. Thus, the need for frequent financial reporting may incentivise short-term investments that reap limited wealth. Scholars such as Alswilem and Rietveld (2018) question whether financial reporting or the frequency of financial reporting (monthly or quarterly) may be detrimental to SWFs, exposing them to undue political biases and influencing their incentives for long-term investments – something that could defeat the purpose of the fund as a wealth-generating economic institution. Therefore, the focus should shift from questioning the importance and

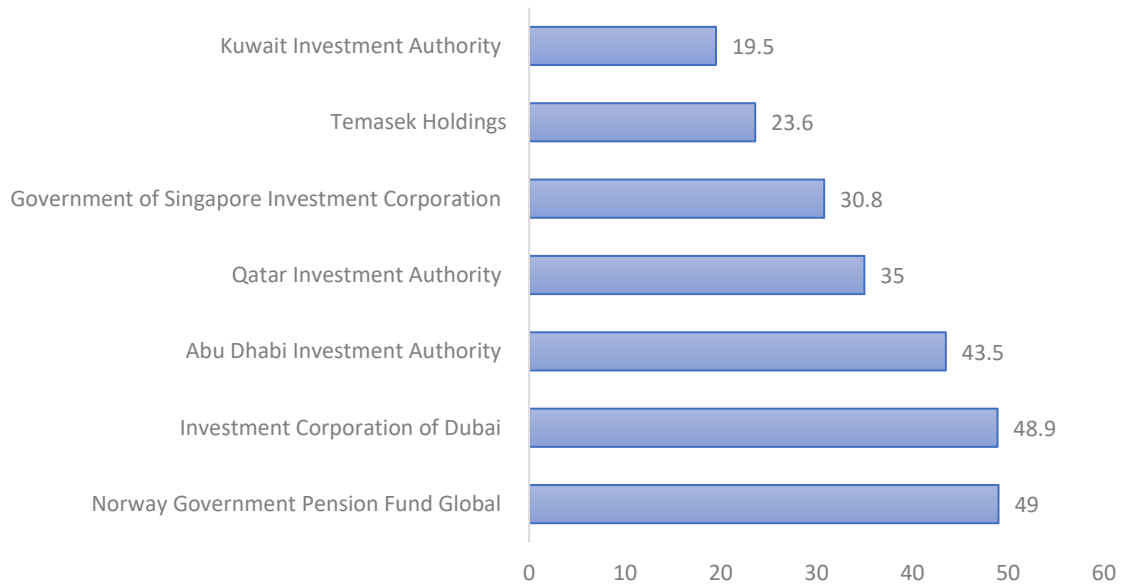
limitations of financial reporting to focusing on the funds' objectives, governance, and rule-based fiscal framework.

Investment performance can further be analysed using investment benchmarks, which include a combination of indices and reference portfolio allocation. However, each fund is unique, and a degree of flexibility is expected. For example, Alsweilem and Rietveld (2018, 125) believe that returns on a diversified portfolio are a benchmark for SWF investments. They construct an example of asset allocation based on the following criteria: 25% on large market-capitalisation US stocks, 10% on small market-capitalisation US stocks, 15% on twenty-one developed markets, 5% on emerging market equities, 25% on global bonds, 5% on US dollar money markets, 5% on global hedge funds, 5% on global commodities and 5% on real estate. Such an allocation is an example of a diversified portfolio of assets but does not necessarily measure the performance of SWFs. In the case of GIC, although it invests in the US, its investments are much less than those in Europe and Asia/Pacific (Figure 5.13). The same can also be said about QIA. Although significant investments have been made in the US markets, they are nowhere near as much as in Europe which occupies over 70% of its investment distribution (Figure 5.8). Favourable markets exist and this in large is related to expertise and whether access to in-house or external asset managers is within the strategic portfolio allocation of the fund.

Economists have attributed the negative impact of investment performance to the misalignment of incentives, focusing on short-term investments rather than optimising long-term investments and 'trend chasing' (Alsweilem & Rietveld, 2018: 178). Trend chasing is in fact, a common aspect demonstrated by many funds that tend to invest in the same sectors of the economy. This should not be seen as a negative impact on investment performance, as this judgment can only be proven with time. Many of the investments undertaken take time to demonstrate their performance. This is a critical feature of SWFs that deserves attention. Evidently, many SWFs commence their investment endeavour with real estate and are among the largest real estate investors, according to market specialists Investment and Pensions Europe Real Assets (Arnold, 2020). Real estate has long been a mainstay of SWFs' strategies and comprises approximately 8% of their total portfolios on average. The managing director of Global SWF, Diego López, has noted the importance of real estate to the portfolios of SWFs (Arnold, 2020). Figure 5.15 demonstrates the real estate holdings of the top funds. Norway's GPFG is the top

real estate holder at \$49 billion, Qatar’s QIA is at number four with \$35 billion, and Singapore’s GIC is at number five with \$30.8 billion.

Figure 5.15: Sovereign Wealth Fund Real Estate Holdings



Source: Arnold (2020)

In the present day, there is a shift from large-sum investments to technology-based investments, many of which are non-tangible compared to the real estate investments of many SWFs.

The complex nature of investment performance was expressed eloquently by Keynes:

Investment based on genuine long-term expectation is so difficult... as to be scarcely practicable. He who attempts it must surely...run greater risks than he who tries to guess better than the crowd how the crowd will behave. There is no clear evidence from experience that the investment policy which is socially advantageous coincides with that which is most profitable. It needs more intelligence to defeat the forces of time and our ignorance of the future than to beat the gun. Moreover, life is not long enough; —human nature desires quick results, there is a peculiar zest in making money quickly, and remoter gains are discounted by the average man at a very high rate. (Keynes, 1936: 157)

What distinguishes SWFs from other investors, apart from a large amount of capital, is the nature of investment decisions and long-term perspective. The frontiers of investment decisions in SWFs are a mix of public and private sector investment methods, reflecting a unique mix of long and short-term investment portfolios. Thus, the investment performance is not defined a priori.

Measuring the performance of SWFs is not a simple task, but quite the contrary; it involves a complex dynamic with SWFs all at different stages of growth. The institutional quality measurement developed by the Truman index published scores for SWFs for 2008, 2012 and 2016 and then stopped publishing updated index values with further studies. The motivation behind the scoreboard was to form a prototype measurement that would promote transparency and accountability. The Truman index refuted the claim that non-transparent equated unaccountable through the scoreboard. The interest in SWFs emerged post-2008 financial crisis as they salvaged a failing global market. The interest then was on transparency, and the focus was on undisclosed information, which was equated to unaccountability. However, today the role of SWFs has been prominent and foundational to financial markets globally and are no longer viewed as questionable institutions as they were post-2008. In the case of Singapore, the GIC does not disclose its fund's performance as revealing financial reserves under management is against Singapore's national interest making it easier to attack the Singaporean dollar during periods of volatility. Therefore, transparency in the case of SWFs threatens the fund's position, and funds are better off not disclosing information that may affect their strategic allocations. In the case of QIA, the fund does not disclose exact numbers of fund performance as in the case of GIC. However, it has been much more vocal about investment strategies and its move to a path where it no longer invests in fossil fuels but invests largely in technology and health. This demonstrates the embedment of fiscal policy into the SWF, where aims and objectives can be disclosed openly. However, disclosing financial reports as a means to measure performance is counterintuitive for SWFs – as many questions are raised – concerning whether quarterly/yearly reporting should be made. If that is the case, the focus would be on short-term returns. This would, in turn, incentivise short-term investments to drive financial reporting, which would defeat the purpose of SWFs as long-term wealth-generating institutions. Financial reporting, in this case, would be detrimental to SWFs, exposing them to biases and influencing incentives for long-term investments. Therefore, the focus should shift from measuring numerical performance values, limiting the scope of SWFs, to focusing on the fund's developments.

To broaden the scope of performance indicators, financial, economic, and operational performance are other components that will be evaluated. The financial and economic performance of an SWF is dictated by the mandate and strategic asset allocation, which are fundamental to the fund's long-term performance. Operational performance is another critical aspect. The resource curse theory assumes that resource-rich economies lack good governance,

grounded in the perception that governments do not demonstrate efficiency as long-term investors. Therefore, the SWF’s operational structure is vital in ensuring investment-driven performance.

5.5.2. Financial, Economic and Operational Performance

Investment performance is complex to measure with respect to SWFs, mainly due to the limited disclosure and mismatch of information. Furthermore, results may vary depending on the scholars’ method and tools of analysis. For instance, Al-Hassan, Papaioannou, Skancke, and Sung (2013, 18) note that the determinants of investment performance are dependent on three aspects: strategic asset allocation (SAA), which is the most critical determinant of risk and return, the type of policy benchmarks and the level of risk taken, which are all retained or delegated by the SWF or the Ministry of Finance depending on the institutional arrangement.

Table 5.22: A Simplified Form of Performance Benchmark

	<i>Stabilisation Fund</i>	<i>Savings Fund</i>
<i>Performance benchmark</i>	Minimising expenditure volatility and maintaining adequate liquidity	Achieving real expected returns for long-term periods to maintain the long-term purchasing of the wealth

Source: Al-Hassan et al. (2013)

The SWF’s institutional arrangement in relation to its mandate and investment management determines its operational efficiency and financial performance. Al-Hassan et al. (2013, 19) note that SWFs’ financial performance is ‘driven by whether the investment portfolio is predominated by fixed income instruments, equities, or is diversified across a broad set of asset classes’. Further to the above-simplified performance benchmark, Al-Hassan et al. (2013, 21) highlight that SAA is the benchmark that determines the risk and performance of an SWF, which is essentially represented by a hypothetical portfolio design. It forms the benchmark that the fund uses to undertake constituent assets and management decisions. Technocratic skills are needed for the appropriate asset allocation, to take place, which would lead to enhanced financial performance. The asset allocation of an SWF fundamentally determines the fund’s long-term performance and, hence, is the most crucial investment policy choice.

Operational independence is a crucial aspect of SWFs’ performance. This belief is grounded in the perception that governments do not demonstrate efficiency as long-term investors. As

Kimmit (2008, 124) states clearly, it is based on ‘the belief that private firms allocate capital more efficiently than governments’. The reason behind this belief is that the government’s incentive structures, and political motivations will not reflect the SWFs mandate, which needs technocratic expertise that is investment-driven rather than suboptimal investments that would be demonstrated otherwise. This view is shared amongst many in the literature – politically motivated investments and management structures affect investment activities. In fact, Bernstein, Lerner, and Schoar (2013, 223) argue that ‘politically directed investments... lead to misguided policy attempts to prop up inefficient firms or industries or engage in investment activities in industries, sectors, or geographies that are hot’. Their empirical research suggests that politically influenced SWFs undertake suboptimal investments, which is reflected in their performance through earning levels (Bernstein, Lerner, & Schoar, 2013: 231). Nevertheless, operational independence is not absolute after all SWFs are semi-government institutions. However, the degree of operational independence allows them to perform as investment vehicles with set objectives and enforces accountability.

Consider, for example, the importance of independence in the Santiago Principles: ‘A sound governance structure that separates the functions of the owner, governing body(ies), and management, facilitates the SWF management’s operational independence to pursue investment decisions and investment operations free of political influence’ (IWG, 2008: 5). Of course, member funds have to adopt the principles – Qatar and Singapore are both members of the IFSWF. For example, the much-lauded Canadian public pension fund model established independence and has developed a reputation as a professional investment institution ‘not tied to implicit or explicit’ government demands but has established its own strategies (Alsweilem & Rietveld, 2018: 183). Operational independence is vital. However, fulfilling the needs of the state, whether in the case of Singapore as a precautionary tool against foreign exchange rate fluctuations and in the case of Qatar as a stabilising vehicle against oil price volatility, requires the fund to fulfil specific fiscal needs during challenging periods; and not function in the same way the Canadian pension fund model operates. Pension funds have a different motivation; thus, not being tied to government demands is understandable. In an interview with the CEO of QIA, when asked which SWF is an example of best practice, the Canadian public pension fund was recalled as an example of a fund that demonstrated best practice and one that follows an investment technique similar to the QIA (i.e., similar asset classes, within a similar benchmark) (Al-Mahmoud, Interview: 2019). Although operational models may differ, investment techniques are similar.

The operational performance of the fund ultimately allows it to respond to the needs of the state and fulfil its role as an institutional mechanism of counteracting volatility and maintaining stability during challenging periods. Integrating an SWF into the fiscal framework of the state prevents cyclical volatilities and maintains a countercyclical rule-based framework. Positioning the operations of SWFs under a cyclically adjusted fiscal framework separates government expenditure from cyclical volatility, but, also in the case of both Qatar and Singapore, allows their SWFs to have a contingent role in the management of the channelled wealth for an undefined future.

5.6. Wealth Management Deconstructed

The traditional SWF bears little resemblance to the present-day SWFs. Notably, SWFs have moved far from solely being a stabilisation fund. The funds were essentially designed to smooth out public expenditures and cushion public spending. The SWFs have developed from macro-economic stabilisation tools to long-term socio-economic institutions. The ancillary objectives of SWFs show a development in their institutional arrangement and scope. This was evident in the case of QIA, especially in the realignment of its asset allocation post-2017 and the policy evolutions. Similarly, Singapore's GIC undertook fundamental changes. However, GIC was able to take such shifts at a much slower pace than QIA. Much like Norway has engineered a resource blessing through wealth management, Qatar has been able to use its resource rents through its SWF. The most critical aspects are effective investment strategies that are constantly checked and balanced to the needs of the fund and to the evolving nature of the international market, while having a prudent management structure that enforces the SWF's accountability in managing the country's wealth. This holds for both hydrocarbon-based SWFs such as QIA and non-hydrocarbon-based SWFs such as GIC.

Furthermore, SWFs have four essential roles; they ensure intergenerational wealth transfer, enable economic diversification, prevent fiscal cyclicity, and maintain macroeconomic stability. However, this does not hold true for all funds, mainly due to the institutional structure of the fund. Both QIA and GIC aim to ensure intergenerational wealth transfer offering an economic diversification arm to the state. However, the other two functions of SWFs do not always hold. This is mainly due to the state's domestic policy – the prevention of fiscal cyclicity and maintaining macroeconomic stability. The QIA demonstrated its ability to

maintain macroeconomic stability by injecting wealth into the economy during the blockade of 2017. In fact, the blockade accelerated QIA's sophistication in building a more diversified and resilient portfolio by reshuffling asset classes and industries. This would have only been possible through fiscal consolidation and prudent fiscal policies resulting in a resilient financial sector. Long overdue for reform, Qatar was pushed beyond its pace after being faced with the challenge of adapting post-blockade. The blockade opened up a unique opportunity for Qatar to demonstrate its potential and capabilities when faced with such an extraordinary challenge economically and politically. The QIA, in particular, was able to step up and show its potential. Without the blockade, QIA's investment strategy would have been much more challenging to decipher. Qatar's economy and SWF are much more synced to the state's fiscal needs and continuously improve. This situation was only rectified post-2017 and was done at an impressive pace. However, the GIC maintains a structure that would not allow it to undertake such a role if Singapore faced a challenge, as the fund is treated as an autonomous institution. Although the investment strategies of hydrocarbon- and non-hydrocarbon-based funds are similar, their domestic structures differ. Thus, in this case, hydrocarbon-based SWFs can be much more resilient in comparison to non-hydrocarbon-based funds.

To further deconstruct the normative narrative in relation to the resource curse and oil-rich states, the analysis of yet another sector can further address the extent to which a resource-rich state such as Qatar is defying the curse. The resource curse theory, with its broad propositions on how natural resource wealth undermines all aspects of public policy, also argues that sectors such as education are also negatively affected in resource-abundant states where the focus would be on quantity of education service provision rather than quality. After having evaluated the genesis of the resource curse phenomenon and assessed SWFs as a corrective measure to the negative externalities associated with resource curse theory. The following chapter assesses the impact of the country's resource wealth on its education and human capital development strategies to assess to what extent the assumptions of the resource curse in relation to education are relevant. The resource curse's simplistic assumptions overlook the ability of a resource-rich state to develop and assume a static state restricted by its resource wealth. Oil-rich states need to be situated within a broader realm of unravelling the resource curse and assessing oil exporters as heterogenous, where each state can face elements of the resource curse in its trajectory but is not defined or confined by its resource wealth and can move beyond the curse on resources.

6. Educating Your Way Out of the Resource Curse

The resource curse theory argues that oil-rich states lack a highly skilled and educated population, suggesting that resources affect the relative investments in human capital. This in large comes from the belief that the reliance on resources can undermine a number of factors in the resource-abundant state, from human capital development to economic diversification. The resource curse theory discourse since its inception has been fixated on low economic performance and associated such unsatisfactory growth with low levels of human capital. This is especially conspicuous in the early studies of the resource curse. Sachs and Warner paved this literature and developed an econometric model to argue that a positive relationship exists between resource abundance and economic growth. Their study sparked a depth of research in the nineties that was adamant that resource riches were ultimately a curse, extending their approval to other variables relevant to growth such as education (Sachs & Warner, 2001: 835).

The previous chapters have focused on the ways in which through the use of investment instruments such as SWFs, oil-rich states may be able to fend off the negative effects of the resource curse and move instead towards diversifying their economic activities through these investment institutions, while also serving other factors such as increasing transparency. An important factor that has been highlighted, is that resource curse theory is conditional on the type of governance structure and as a result is not inevitable. This chapter analyses another notion of the resource curse theory that may also be challenged through the analyses of the operations of an oil-rich state's education. If consolidating fiscal institutions can turn the resource curse into a blessing, the surge in educational institutions could in effect alter the assumptions of the resource curse theory in relation to human capital. Resource wealth does not lead to a lack of financial discipline and inefficient distributions of wealth. The management of macroeconomic factors is shaped by domestic political institutions, which ultimately determine macroeconomic mismanagement and performance (Elbadawi & Selim, 2016: 8).

The presence of institutions that manage the resource wealth determines the distribution of wealth efficiency and this at large is dependent on the institutional foundations that are established and developed using resource rents. However, it is also important to incorporate likely changes that have promoted improvement either through innovative forms of development or in response to domestic needs. This is a crucial aspect in the analysis of

resource-rich states as the resource curse theory considers rentier states as static and dismisses the dynamism associated with the state's progression and evolution.

The resource curse theory has seldom been systematically analysed in relation to a single Middle Eastern state. The norm is to group states geographically together as homogenous entities, and so what is understood to be the reality is really the result of intellectual production based on interpretations and groupings related to sources of production. In order to deconstruct the normative narrative in relation to the resource curse and oil-rich states, it is imperative to delve into each state to address whether they are under the curse and to what extent are they defying the curse. Given the rapid economic and infrastructural development of the oil-rich states in the Middle East since the discovery of oil and the deployment of massive resource wealth into concurrent developments 'it is difficult to point to oil as a catalyst for an economic resource curse' (Kamrava, 2018: 3). Furthermore, the institutional developments that they have been able to achieve and bolster using oil rents have been somewhat sufficient enough to fend off the imbalances that engulfed neighbouring Arab states in 2011. Kamrava (2018, 5) argues that oil-rich states outperform their non-oil neighbouring states 'in terms of private consumption and higher levels of well-being', resource wealth enables oil-rich states to develop capacities that non-oil states do not have. The strategic management of wealth can prove to be fruitful in providing the state with the needed macroeconomic stability and thus turning the curse into a blessing of manifolds.

The Gulf States in particular have an upper hand when it comes to high levels of oil rents and per capita GDP in comparison to non-oil states within close proximity such as states in the Levant. States in the Gulf have the financial endowments to embark on economic diversification plans that are not only large in physical capacity but bring considerable change to the educational capacity in the region with the aim of fostering a high-value population through human capital development. This is reflected in each of the Gulf states' national visions, as well as large-scale state initiatives in the creation of education hubs such as the King Abdulla University of Science and Technology in Saudi Arabia, Knowledge Village and Internet City in Dubai, the Masdar Institute of Science and Technology in Abu Dhabi and Education City in Qatar. Yet, scholars have argued that states that rely on resource wealth tend to underinvest in education (see Humphreys, Sachs, & Stiglitz, 2007).

The most prominent argument present in the literature is based on the premise that oil-rich states direct their wealth into industries that are beneficial to their strategic commodity creating diseconomies of scale while being unable to effectively deliver public welfare needs. Given the undiversified economic structure of oil-rich states and the rigidity of their government spending, education is not considered an essential sector for investment due to the short-sightedness attached to oil-rich states' actions. If this holds it would ultimately destroy the social fabric of the country as it would lead to severe economic disruption and instability. However, what is problematic is the assumption that resource curse theory attaches to oil-rich states, which is far too simplistic for various reasons: first, oil exporters are not a homogenous group and should not be treated as a group simply because they share the same commodity, each country varies tremendously in terms of resilience and comparative advantage. Second, each country is on a different level of development and for that reason, each country should be explored within a thematic but rudimentary manner. Last, each country is pursuing different policies with different levels of complexity and integration of their strategic energy sector. This is fundamental, as discussed previously the initial condition of the country prior to being an exporter of oil influences the country's development trajectory. Further, this would dictate their response to challenges associated with oil rents and the distribution of rents to the different sectors of the economy. The development of oil-rich states in relation to the continuous changes in the global economy challenges oil-rich states' rent deployment, while at the same time showcasing whether the state is resilient or not. This requests for oil-rich states to construct their own methods to deal with global challenges and thus increases their resilience to potential market disruptions to oil rents.

The rentier model has a very particular say on education, in fact, it argues that some oil-rich states use public sectors such as education or health provision in order to create a network of patronage vis-à-vis people and by creating such quantities of welfare, the population enter a social contract which in turn guarantees the political popularity and sovereignty of oil regimes. The rentier model captures the salient features of oil-rich states. The principal function of a rentier state is the allocation of resource rents, which the model argues influences incentives away from productive measures, which could otherwise produce more favourable modes of production. It has long served as a leading explanation for weak political institutions in oil-rich states. However, the broad claims the theory makes in regard to patronage need to be understood through a prism that understands the dynamics at play. The realisation that needs to be made is that although the rentier model demonstrates how oil rents have allowed oil-rich

states to expand public services and maintain a welfare system, it falls short of capturing the nuances within a thematic context.

The concept of knowledge economies has recently been embodied within the broader process of structural change in response to the larger global accelerating flow of information and the transformative nature of technology. It has been observed that Middle Eastern states have used a large share of their resource rents from the 2002–2008 oil price boom to invest in higher education and scientific research. A move towards a knowledge-based economic structure is an official acknowledgement of the importance of human capital development and its significance within the broader international labour market (Ulrichsen, 2012: 95). This rhetoric is quite the opposite of the notion of education in resource curse theory which stipulates the failure of oil-rich states to fully benefit from their resource wealth in an effective manner, in relation to public welfare needs and education. The shortcomings of the resource curse are the oversimplification and homogenization of oil-rich states, which shows the lack of development of the theory in providing explanations for the drastic changes in the political economies of oil-rich states.

Investing in human capital falls under the fiscal rules of the state which are crucial to the allocation of state revenue. Deeply embedded in the resource curse is the assumption that the temptations are high to overspend during periods of high commodity prices hence depleting resource rents in ineffective economies of scale. Human capital development is an important driver of growth; however, it is also an intangible asset which may be understood from the point of view of the resource curse as unattractive to resource-rich states which are characterised as short-term visionaries.

Analysing resource-rich states that are classified as weak institutionally through the assumptions of resource curse theory and evaluating what they have been able to achieve in the form of economic development from resource rents is the only way to progress the theory on resources. While offering new prospects for the political economy of oil. After having evaluated the genesis of the resource curse phenomenon and assessed SWFs as a corrective measure to the negative externalities associated with resource curse theory, this chapter uses Qatar as a case study to assess the impact of the country's resource wealth on its education and human capital development strategies to assess whether Qatar fits into the 'resource curse' assumptions in this sector. Qatar's ambitious education initiatives have shown an attempt to

break out of resource-based growth and transition to a knowledge-based economy. The analysis focuses on major educational initiatives and their performance and outcome, particularly in steering away from the commonly held risks to human capital development stemming from high dependency on natural resource revenues. The implications this may have on the stratified labour market is also explored and a contextualisation of whether this is reflected in national visions and plans. The chapter examines micro-level and meso-level examples of knowledge production that move beyond the simple acknowledgement of the initiatives to examine the challenges and opportunities at hand in the maturation of institutional initiatives.

6.1. Low Educational Attainment and Resource Riches Debunked

The resource curse theory has long argued that along with low economic growth, educational attainments tend to be low in resource-rich states (see Gylfason 2001; Sachs & Warner, 2001). The discourse is very repetitive, and many studies incorporate educational attainment along with other indicators that portray their argument of the resource curse. Gylfason et al. (1999, 205) argue that a negative correlation between resource abundance and education exists, their hypothesis is based on the following: natural resources inhibit economic growth by reducing investments in human capital. Their argument is based on the sectoral distribution that they observe, namely a prevailing primary sector as opposed to a secondary sector affecting human capital development. Similarly, a few years later Gylfason (2001) demonstrates that states that are resource-abundant experience low educational attainment levels. This argument is based on the observation that resource rents crowd out human capital, by devoting inadequate expenditure to fund domestic educational needs, thus decreasing the level of economic development. To put it in Gylfason's (2001, 850) words 'natural wealth may blind them to the need for educat[ion]' at the same time he does not fail to highlight the fact that Botswana and Norway are both exceptions to his earlier assumptions in relation to education and resource wealth. Therefore, seeing as exceptions exist in relation to resource abundance, the placement of resource-abundant states as a homogenous group should be displaced. The logic behind such a discourse comes from the belief that countries with resources treat their resource capital as their sole engine for growth, develop a form of false security and thus become neglectful of human capital development. This in large is because resource rents allow for resource-abundant states to function well with low commitments to education. On the other hand, non-resource-

rich states have a significantly smaller margin for error and thus direct their wealth into human capital development.

Other scholars consider other factors alongside education such as Glaeser et al. (2004) that draw a negative correlation between education and corruption. The explanation is as follows: because natural resources are owned by the state, appropriate property rights are not defined, and this enables the appropriation of resource wealth, by such means corruption takes the form of rent-seeking behaviour that directs resource rents (Aldave & García-Peñalosa, 2009). The argument that is made is that political capital influences the output and growth of human capital. However, the concept is much more complex, and the theoretical results mirror the ambiguities present. Aldave and García-Peñalosa's (2009) study approach the resource curse theory from a different perspective as growth is equated to human capital. They argue that corruption and education are correlated and are affected by natural resources, this in large is due to the accumulation of political capital, which has a ripple effect on levels of production, output, and educational attainment, which in effect reduces growth; however, the effect of resources is seen to be ambiguous (Aldave & García-Peñalosa, 2009: 21). They suggest that studies are needed to assess the effect of resources on corruption and education and whether it is sufficient to use these two factors to explain the resource curse.

The theoretical literature has generally considered education as a factor that responds to resource wealth negatively alongside an array of factors such as economic development and corruption – and not necessarily independently (see Aldave & García-Peñalosa, 2009; Glaeser et al., 2004). Glaeser et al. (2004) show through econometric methods of analysis that human capital is important as it raises institutional quality. Human capital is important to a state on many levels, first having a knowledgeable population means that the economy can compete better globally. This also means that the individuals running the institutions are much more aware of property rights and the redistribution of wealth. In fact, the research undertaken by Glaeser et al. (2004) stresses that current measurement methods of institutions and the limitations associated with economic methods of analysis used in research are conceptually flawed and that researchers should instead focus on actual procedures, rules and laws that would allow policymakers to make the appropriate policy choice. The mediation of government policy and investment decisions in educational provision has proven that the curse of natural resources is not inevitable, as supported by the experiences of Botswana and Norway

who have transformed their natural resource wealth into a blessing of many folds, reaping economic growth while spending large shares of rents on education (see Gylfason, 2001).

The resource curse emerged at a time that was fundamental to the assumptions the theory makes in regard to oil-rich economies. The 1970s was a critical time for oil-producing states as they claimed ownership of their oil production. It was also a time in which oil-rich states witnessed their second oil boom, but this time many of the oil-producing states had full ownership of oil production and so the rents generated could fully be absorbed by the domestic economy. Oil was the engine, the driving force of the global political economy, thus such a fundamental change may have led states to spend or restrain from certain investments or developments domestically. Yet, the resource curse associated oil with a curse on development through two channels, the first is associated with low export diversification and the second is a lack of incentives to invest in the economy as a whole and this includes education. However, this only occurs if oil expenditure does not satisfy the needs and welfare of the population and is common in states with weak institutions. Girod and Walters (2018, 15) note that hoarding wealth rather than investing newfound oil riches in broad development needs is problematic and evident in states such as Gabon and Equatorial Guinea. Decision-makers' choice to invest in socioeconomic development is highly dependent on many factors such as the state's overall strategy, socioeconomic priorities, and political position.

A factor that is worth highlighting is the status of state institutions set pre-oil and their position, institutions that had a dominant position could easily develop now there is an extra flow of rents. According to Girod and Walters (2018, 16) leaders in oil-rich countries had the incentive to invest oil expenditure in developing infrastructure and invest in redistributive institutions as a means to claim domestic power against domestic rivals. Therefore, in order to centralise domestic power and reinforce the ruling class's political survival, development programs and social services were expanded. Investing in domestic development projects was a strategic choice in response to the flow of wealth from oil and in order for leadership to gain centralised power. The Middle East in particular has social welfare programs for all their nationals, providing them with free education and health care examples include Kuwait, Oman and Saudi Arabia (see Girod & Walters, 2018).

The political economy literature establishes that whether oil is a blessing, or a curse is dependent on socioeconomic developments. These developments are dependent on three

aspects: institutional foundations at the time of oil discovery, wealth allocation and the institutional developments that occurred as a result of state advancement. In a study by Girod and Walters (2018, 13) it is argued that states in the Middle East that were governed by ineffective formal institutions, including weak redistributive institutions, power sharing and checks and balances, nevertheless invested in human capital from newly gained oil wealth. They study Kuwait and Oman and note that due to the strong informal institutions in Kuwait and Oman decision-makers were compelled to spend oil revenues on human development (Girod & Walters, 2018: 13). The analysis highlights the different dynamics present in rentier states and the role of domestic pressures that translate in this case into increased educational expenditure. Spending on education, however, is a much larger notion that needs time to manifest and thus increasing expenditure on education does not necessarily translate to human capital development.

The literature clearly emphasises how Middle Eastern states invested a large share of their oil revenues in human and physical capital, which led to remarkable investments in the welfare system. Although Girod and Walters (2018) note that it remains unclear to scholars what incentivises policymakers to spend on socioeconomic developments after oil discovery, it seems self-explanatory in the prism of the rentier state theory. Where it has been argued that investing in sectors such as the education sector has been used as a means of buying off political patronage among the masses (see Girod & Walters, 2018; Malik, 2017). However, such education strategies rely on providing large-scale access to education rather than quality education, which has resulted in low-quality educational services. This has led to a consequently segmented labour market – where the educational system is not necessarily fulfilling the needs of the labour market. This then results in high levels of youth unemployment which is another symptom of the resource curse that scholars point to. This is part of the wider broader implications of human capital development. Yamada (2018) suggests that oil rents could have posed a substantial barrier to human capital development. This boils down to the assumptions of the resource curse theory in appropriating education as a stigma to oil-rich states. Scholars such as Gylfason (2001) argue that resource rents stagnate human capital as the population can live on resource rents and thus there is no incentive to invest in education since the economy does not need competitive human capital. However, the causal relationship between oil and human capital development is believed to be in its infant stage of investigation (Yamada, 2018).

6.2. Is It Correlation or Causation?

While some scholars are adamant that oil rents stagnate educational achievements in oil-rich states, others such as Stijns (2006) dismiss Gylfason's argument by demonstrating that associating a negative relationship with natural resources and human capital development is statistically unsound. He reviews commonly used indicators and states that the claims made about such a negative relationship are not robust as the resource abundance indicators that are used are questionable and easily influenced. Stijns (2006) does not just stop here, he accuses Gylfason of incorporating elements such as the non-timber benefits of forests that have nothing to do with natural resources restricted to minerals and fuel. He further states that oil wealth and resource rents per capita have proved to be significantly correlated to human capital development with improved indicators. Through his study, Stijns has shown how past research such as that by Gylfason has fallen for the most fundamental problem of econometric methods of analysis: multicollinearity, which essentially undermines the statistical significance of the independent variable. When the simple choice of indicators can in fact carry the research question left and right, it is reasonable to question whether it is causation or correlation that is driving the conclusions made. It seems in many studies that negatively correlate resource abundance to human capital that there is an arbitrary choice of indicators or at least an indicative issue in the sample choice.

The significance of human capital and good institutional quality must not be undermined by the assumptions of the resource curse theory, where the claims themselves are dampened by problems in data analysis, choice, and methods. Eslamloueyan and Jafari (2021, 11) underscore the crucial role of human capital and strong institutions in increasing economic growth in oil-rich economies. In fact, they compile an econometric model to address the problem of endogeneity resulting from the reverse causality between the dependent variable, oil abundance and the explanatory variables, human capital and institutional quality and devise a threshold level of human capital above which the resource curse turns into a resource blessing. Their findings demonstrate that the inverse relationship between economic growth and resource abundance is not inevitable and having the right policy choice is essential. A report by the World Bank (2011, 15) highlights that the experiences of other resource-abundant countries such as Chile and Botswana reaffirm that the alleged inverse relationship is not deterministic while highlighting the importance of policy.

The recent discourse on resource curse theory has attempted to devise solutions to avoid the curse by reviewing past data in order to identify mechanisms in which resource-rich states can turn their resource abundance to their advantage. The study by Shahbaz et al. (2019, 54) explores the effects of natural resource abundance on economic growth for the period 1980–2015 in 35 natural resource-abundant countries, they find that natural resource abundance contributes to economic growth, whereas natural resource dependence is what retards economic growth. The study further demonstrates that countries with low human capital development such as Cameroon, Nigeria and Saudi Arabia are positively affected by the abundance of natural resources, but negatively affected by the dependence on natural resources, which shows that the curse on natural resources only holds ‘if natural resource rents are not transferred to investments that increase the accumulation of human capital’ (Shahbaz et al., 2019: 54).

In order to capture the quality of education and not simply education as a factor, specific indicators that can capture human capital development need to be addressed. The resource curse narrative has for so long focused on education as an inefficient factor to the economic growth of resource-abundant states without defining the indicators used to capture education. Furthermore, the time when many of the resource curse arguments spread was a critical time for all resource abundant states, the 1970s was truly a crucial time in the history of all oil-rich nations; therefore, basing the resource curse assumptions on data from such a time period is problematic. Sachs and Warner (1995) base their study on data from 1970 to 1989 capturing not one but two oil price shocks, by capturing such volatile periods questions of time-specific results arise. Examining other periods of time is the only way the research narrative should develop and not remain stagnant with the assumptions of the past. The resource curse theory could prove its existence over periods of time, but it should not be viewed as an inherent characteristic of resource-abundant states. For instance, in a study by Sepehrdoust and Shabkhaneh (2018) the data that was used to ascertain the effects of human capital development on economic growth in oil-exporting countries was from 2000 to 2016. Furthermore, the study uses knowledge-based factors such as social development and financial and technological factors to capture the effects on economic growth. The study finds that an increment of 1% in social development, technological improvement and financial indexes has a significant positive effect on GDP and leads to an economic growth increase of 2.8, 0.6, and 2.2% (Sepehrdoust & Shabkhaneh, 2018: 149).

6.3. Policy Choices Towards Quality Education

No formal consensus has been reached on the relationship between resource abundance and human capital development. However, previous studies can provide valuable inspiration for further study and also allow for the identification of gaps in the research. After having highlighted the problematic assumptions associated with statistical methods of analysis, another research strand proposes to explore policy choices. Shao and Yang (2014) connect human capital development to policy interventions targeted at providing the necessary impetus for human capital development. They argue that in order to achieve sustainable economic development, resource wealth needs to be allocated to increasing educational opportunities and refining educational quality (Shao & Yang, 2014: 641). In retrospect, the rentier model as discussed argues that investing in education is a form of patronage, largely due to the large-scale access to education rather than focusing on the core benefit of education which is quality. Nevertheless, the discourse seems to place education within a framework that focuses on the unproductive means of education due to the vast scale and patronage triangle. As soon as the research looks at other means that could in fact prove fruitful, they identify that in fact, quality education could reverse the outcomes of the curse when it comes to education.

The strategy to utilise oil rents into human capital is fundamental to the shift towards knowledge economies (Ulrichsen, 2012: 95). A knowledge-based economy involves the shift from the traditional reliance on physical capital towards one where knowledge-based industries are paramount. The term knowledge economy was first coined by Drucker in the 1960s where he believed that knowledge ‘has become the central capital, the cost center, and the crucial resource of the economy’ (Drucker, 1992: xxix). The intangible nature of knowledge is at the core of knowledge-based economies, where stratified tangible capital is no longer the prime driving force of the economy. For instance, Foray (2004, x) identified a series of structural transformations in the knowledge economy, one is a long trend in the expansion of ‘knowledge-related’ investments and activities and two is a radical change in the conditions of production and the transmission of knowledge and information ‘the accelerating (and unprecedented) speed at which knowledge is created and accumulated’. In fact, according to Ulrichsen (2012, 98) the scale and intensity of investments in the knowledge economy in the Middle East has grown significantly since the 2000s.

The provision and access to education called for the United Nations Development Program to issue an Arab Human Development Report in 2002. It addressed that there was ‘a pressing need for deep-seated reform in the organisational, social and political context of knowledge’ (UNDP, 2003: iv). The report recognised that the renewal of education would represent a turning point in the creation of an Arab knowledge society. The discourse on the move to a knowledge-based economy is evident in the policymakers’ debates that seek to embed human capital development strategies in their national visions. In Qatar, for instance, the RAND-Qatar Policy Institute (n.d.) was formed in 2003 with two missions, which are to allow for the full scope of RAND’s analytical resources to be available to policymakers in the Middle East, North Africa, and parts of South Asia and to build the capacity of Qatar’s human capital and institutions by offering work and training that expose them to the RAND style of policy.

The introduction of knowledge-based economies into the discourse articulates the question of quality education in the building of human capital. Initiating knowledge-based economies is a unique and personal process and varies tremendously from state to state, as the exact definition of what is encompassed within knowledge creation and accumulation is vast and unquantifiable. Building human capital is a complex process that requires a greater level of reform that later translates into educational excellence, all underpinned by a value-creation education system and a labour market that is able to absorb the human capital. In the case of oil-rich states taking the route of initiating knowledge-based economies and bolstering human capital is a direct response to the pressing need of preparing for a post-oil future by diversifying their economies and establishing a self-sufficient population. The World Bank (2008) published a report on the educational reforms in the MENA identifying the broader challenges of reform, however, the main findings of the report highlight crucial factors that can be revisited particularly because during the time of the report human capital development was not fully capitalised. The report findings highlight that the MENA region has made significant improvements to their education sector starting in the 1960s and 1970s from having low levels of human capital development. Past investments in education have yet to fully capitalise during the publishing of the report – more than a decade has passed and thus the time is sufficient to revisit the levels of human capital development.

6.3.1. Shortcomings of the Discourse

Qatar the focal of this study is considered a novel entrant into the knowledge production realm. The State of Qatar has dedicated the last two decades to investing tremendous amounts of wealth in the education system and the expansion of universities. To understand the extraordinary scale of investments, an approximation of the wealth dedicated to the development of human capital will be analysed. In 2009 state leaders announced that 2.8% of GDP annually would be devoted to research and development (Gulf Times, 2014). The World Bank estimated Qatar's GDP to be US\$161.1 billion in 2017, which translates into US\$4.70 billion in research and development. This is more than the world's average of 2.5% and much higher than the average of 0.2% in neighbouring Middle Eastern states (Gulf Times, 2014). According to Crist (2017, 229), 'Qatar's investment is thus substantial, matching many European countries with developed higher education and science systems and historically high scientific productivity'.

Then why is it that oil-rich states are homogenously classified as lacking in human capital? The insufficient investments in education come from the understanding that relying on resource wealth leads to negligence in diversified and skilled labour, who are needed to support other economic sectors. According to Humphreys, Sachs, and Stiglitz (2007) when the share of national income spent on education declines this affects school enrollment along with the duration spent at school. An important point they make is that although such declines may not reflect immediate changes as capital-intensive sectors constitute a large share of national production, the effect will be substantial in the long run when the economy is diversifying. This is where gaps in particular qualifications in the labour market are witnessed.

What is evident in the discourse is that the approach scholars have taken in regard to the resource curse theory has substantially shifted. In the past, the focus was on providing methods to prove that resource abundance was, in fact, a curse on the country of origin, whereas since approximately 2018 the research has taken a substantive effort to identify methods in which resource-abundant states can avoid the curse. Where in the past the literature was stagnant at the weak institutional dynamics present in resource-abundant states and offered little to no route out of the curse. The present discourse aims to look at states that are exceptions to the curse, apart from the well-known Norwegian example and lessons that can be learnt from their experience. The research needs to delve beyond the common rhetoric, for instance, in a study

by Girod and Walters (2018) Kuwait and Oman both oil-rich states were identified as outliers to what the resource curse literature maintains – both countries experienced development despite weak institutional dynamics at oil discovery. However, what is different is that unlike other oil-abundant states Kuwait and Oman ‘contained a strong informal institution that compelled rulers to spend oil revenues on human development’ (Girod & Walters, 2018: 13). In fact, their research goes further on to demonstrate that Kuwait and Oman avoided the oil curse on human capital attainment and identify them as cases that contradict the consensus on development in the resource curse. They argue that the most important factor that compelled leaders in Kuwait and Oman to spend on human capital was ‘a balance of power among rulers and rivals’ spending on domestic development meant that they could appease potential rivals (Girod & Walters, 2018: 14). This is demonstrative of a broader more paradigmatic relationship in resource wealth dynamism between leaders who have the power to distribute wealth and who they see as rivals, be it other neighbouring states in the region or internationally. Albeit informal this dynamism is what compels decision-makers in these states to spend on human capital development. In fact, the Middle East was considered to be of little strategic significance (Maliniak & Tierney, 2009). The region is often seen through an Orientalist gaze that influences the analyses of institutions especially when an inherent association has been developed to associate the natural resource riches that almost all of the Middle Eastern states are rich in with low economic development.

Resource curse theory situates oil-rich countries in a dynamic where oil wealth management is flawed or in other words unfulfilling to economic development. However, relatively recent research seems to shed light on how oil-rich states have been able to achieve a broad reconstruction of institutions. Similar to Kuwait and Oman, Qatar has been able to establish a name for itself in the region and globally as a one-of-a-kind educational hub. What is analysed is how Qatar was able to invest in human capital as a strategic wealth management choice and withstand likely challenges that other oil-rich states face in terms of wealth distribution. What were the strategic predicaments that Qatar took in relation to investments in human capital? Despite the analogous structural pressures that oil-abundant states quintessentially face Qatar has still managed to invest vast amounts of wealth into human capital development. This not only builds on the literature that argues that the resource curse is conditional on weak institutions, but it also adds to the research on the Middle East and provides important implications for theory and policy.

6.3.2. Contextualising Education

The global perception of human capital and its importance in the overall development of the state has been a compelling subject. In fact, scholars such as Dill and Van Vught (2010, 107) highlight that ‘natural resources no longer provide a comparative advantage in economic growth... promoting innovation has in fact now become the principal means of economic growth... to better compete in a globalised economy... countries focus increasingly on knowledge, creativity and technical innovation’. In this context, education is no longer a personal attainment, but a means of sustaining international competitiveness. In fact, in this new global context education and research are crucial components of national policy (Dill & Van Vught, 2010: 107). Education has undergone remarkable transformations and is ‘now perceived by policymakers to be the primary factor influencing further social and economic development’ (Dill & Van Vught, 2010: 108). The way in which education can influence international competitiveness is at large due to globalisation and the available capacity to disperse knowledge, which is strategically beneficial. According to Dill and Van Vught (2010, 108), education is now perceived as the engine of economic development and an essential condition for international competitiveness. Human capital is seen to be a key factor for growth, development, and competitiveness, in large due to the multiple benefits this provides on the individual and national level, as well as a bolster in productivity and innovation levels (WEF, 2017).

Economic development can be understood as a major factor in the development and progress of nations. It is a fundamental pillar that distinguishes developed from developing states and thus it is common that changes in societies have a bearing on education. Whether it be tertiary education which may prompt the formation and re-structuring of educational systems to fit the demands of the nation-state or to situate itself within a broader framework of educational progress. Therefore, in order to contextualise education and analyse its effects on society, the educational journey needs to be put on a trajectory that can trace the foundations and developments of education. The construction of an educational system is not simply a product of an institutional system but is also the result of a wider vision the state aspires to achieve. When states are at a transformative stage of building institutional systems of governance education is usually regarded as an essential component. Al-Khouli (2012, 223) notes that the Middle Eastern states have passed beyond this foundational stage at different periods, ‘consistent with the emergence of oil wealth as one of the most important determinants of the

construction of the modern state in the Arabian Gulf area'. It is indicative that many Middle Eastern states have passed this transformative stage as they now host international university campuses, which have increased educational aspirations emphasising tertiary education.

6.3.3. Can We Capture the Capital in Human Capital?

Before analysing education in Qatar, a review of the different indexes used globally to measure human capital attainment provides an understanding of the dynamics of human capital development. In order to uniformly present educational development worldwide, the World Economic Forum has developed the Global Human Capital Index to show the knowledge and skills possessed by each state's population. The index assesses the full potential of a state's human capital, which is based on a four-step thematic analysis: first, is capacity which measures the level of formal education of the younger and older generations as a result of past education investment, second, is development which quantifies the formal education of the future generation workforce against the up-skilling and reskilling of the current workforce, third, is the deployment of skill application and accumulation among the working population; and fourth, is the know-how which is a measure of the breadth and depth of the use of specialised skills at work (WEF, 2017: 3). The index also serves as a time-series analysis that provides states with the quantification of key skills that can be used to track progress, resilience, and performance. The World Economic Forum (2017, 3) considers human capital to mean 'the knowledge and skills people possess that enable them to create value in the global economic system'. The index captures key concepts and provides policymakers with the ability to track their progress and performance in relation to others. Furthermore, the index regards skills and acquiring education as a dynamic force, and one which is responsive to change. Human capital is critical to the productivity of society, as it represents the human capacity making the decisions to invest in educational provision.

Now to situate Qatar within the human capital discourse it is essential to view where it is situated in global indexes. The Human Capital Index measures the value of productivity. The Human Capital Index (Table 6.1) for Qatar is 0.61, this means that the productivity of the workforce will be 61% of what it could be if they had benefited from complete education and good health. The Human Capital Index is not simply indicative of education and health, but in the case of Qatar, it shows that business costs 39% of income.

Table 6.1: Human Capital Index

	Qatar		Kuwait		Saudi Arabia		Norway	
	2018	2020	2018	2020	2018	2020	2018	2020
<i>Income group</i>	High income		High income		High income		High income	
<i>Probability of Survival to Age 5</i>	0.99	0.99	0.99	0.99	0.99	0.99	1.00	1.00
<i>Expected Years of School</i>	12.3	12.8	12.4	12.0	12.4	12.4	13.7	13.7
<i>Harmonized Test Scores</i>	432	427	383	383	407	399	512	514
<i>Learning Adjusted Years of School</i>	8.5	8.8	7.6	7.4	8.1	7.9	11.2	11.2
<i>Adult Survival Rate</i>	0.94	0.96	0.92	0.94	0.91	0.92	0.94	0.94
<i>Human Capital Index</i>	0.61	0.64	0.58	0.56	0.58	0.58	0.77	0.77

Source: World Bank (2018; 2020b)

In fact, according to data from the World Economic Forum, only three states in the Middle East namely the United Arab Emirates, Bahrain and Qatar outperform the rest of the states in the region in terms of human capital development largely benefiting from their robust educational systems and score in the mid-range of states ranked in the index; Qatar, for instance, scores 63.97 and ranks 55 out of 130 (WEF, 2017: 8). Table 6.1 clearly shows incremental increases in the human capital index from 2018 to 2020 and an increase in the years of schooling along with the learning-adjusted years of school for Qatar. Although the harmonized test scores are lower, that may be because of the increase in the years of schooling that corresponds to a larger sample size. Measuring human capital through a unified index underscores the importance of state efforts in investing in the human capital of its population and creates a transparent portal, against other Middle Eastern oil states such as Kuwait and Saudi Arabia (as depicted in Table 6.1). Qatar is progressing at a pace that is systematic. Norway has been included in order to situate Qatar, Kuwait and Saudi Arabia within the broader framework of oil-rich states. Norway in particular is notorious for its diligence and transparency in investing in oil rents. As evident in the table above, Qatar's scores are not very far from Norway, which shows that Qatar to some degree is anticipating a competitive Human Capital Index. The Saudi Arabian effort in the creation of economic cities as hubs for the diffusion of knowledge and the creation of jobs is a large initiative that the Kingdom is undertaking (Ulrichsen, 2012: 101). This could also explain why Saudi Arabia has maintained its index, which may not necessarily reflect fast progress but sustainable progress.

Another quantifiable index is the Global Competitiveness Index, which was introduced in order to create common ground between economies and societies. The disruptions and polarisations as a result of globalisation have created wider divisions between economies and thus the aim was to put forth an index that acts as a yardstick for policymakers to look beyond short-term

reactionary measures and instead assess progress against a set of factors that determine productivity (World Economic Forum, 2019: 5). The index consists of twelve pillars, however, the most relevant to human capital development is the sixth pillar namely skills. The indicators are presented in the table below, where it is clear from the one-figure rankings that the skills of the current workforce and the skills of the future workforce are relatively high. The skillset of graduates is ranked eighth globally and the ease of finding skilled employees is ranked third. The skills of the future workforce and critical thinking in teaching have both achieved the sixth ranking. Qatar is ranked 29 out of 141 as of 2019 with an overall score of 89 for human capital (World Economic Forum, 2019). If the rentier model is applied here, it would not anticipate for an oil-rich state to score such high rankings for the ease of finding skilled employees, let alone the skillset of employees. In fact, it is believed that rentier states have no human capital model and thus rankings such as critical thinking in teaching and the skills and skillset of the future workforce should be low for oil-rich states. However, as apparent in the overall ranking of Qatar in the Global Competitiveness Index and the rankings for the individual indicators that is not the case.

Table 6.2: Indicators for Qatar from the Global Competitiveness Index

	INDEX	VALUE	SCORE	RANK/141
SKILLS	Current workforce		66.8	34
	Mean years of schooling	9.7	64.4	68
	Skills of current workforce		69.2	11
	Extent of staff training	4.9	64.8	21
	Quality of vocational training	5.1	67.5	16
	Skillset of graduates	5.3	70.9	8
	Digital skills among active population	5.3	72.2	11
	Ease of finding skilled employees	5.2	70.8	3
	Future workforce		74.3	52
	School life expectancy	11.9	66.1	91
	Skills of future workforce		82.4	6
	Critical thinking in teaching	5.1	69.2	6
	Pupil-to-teacher ratio in primary education	11.8	95.6	22

Source: World Economic Forum (2019)

The UN Development Programme's Human Development Index, which is comprised of three indexes, life expectancy index, education index and GNI index, placed Qatar at number 42 out of 191 on its 2021 list, ahead of Kuwait at 50 and after Saudi Arabia at 35 (Human Development Index, 2021b). Between 2013–2016 Qatar was ahead of all the Gulf States and showed consistent improvements in rankings yearly (Table 6.3). In 2017 and 2018 no report was published; however, it also marks a particularly challenging time for Qatar as in June 2017

there was a land, sea, and air blockade from four neighbouring Gulf States (discussed in Chapter Five) which could explain the downward traction in scores from 2019–2021 as opposed to the earlier scores. Progress has been shown in the last ranking of 2021 as opposed to the 2020 ranking, which was Qatar’s lowest ranking. This also situates Qatar within a broader global narrative and encourages healthy competitive strategies in order to maintain and surpass the previous rankings.

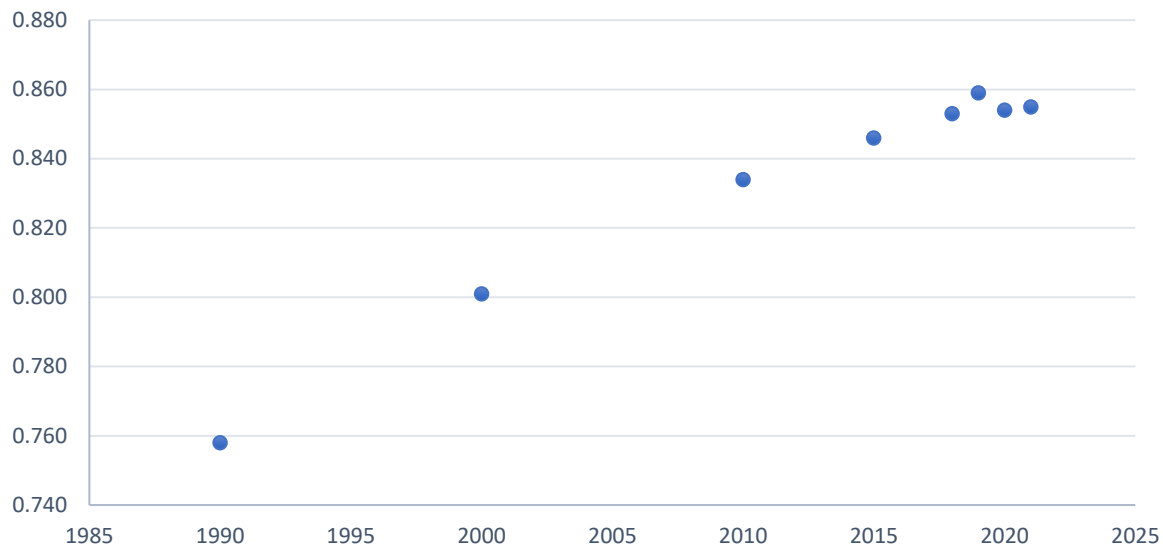
Table 6.3: UNDP Human Development Index Rankings, 2013–2021

	<i>Qatar</i>	<i>Saudi Arabia</i>	<i>Kuwait</i>	<i>United Arab Emirates</i>
<i>2013</i>	36	57	54	41
<i>2014</i>	31	34	46	40
<i>2015</i>	32	39	48	42
<i>2016</i>	33	38	51	42
<i>2017</i>	-	-	-	-
<i>2018</i>	-	-	-	-
<i>2019</i>	41	36	57	35
<i>2020</i>	45	40	64	31
<i>2021</i>	42	35	50	26

Source: UNDP (2013–2022) compiled data

To better understand Qatar’s position and likely trends, it is important to isolate the Human Development Index for Qatar and assess its developments and direction. Figure 6.1 shows the value of the Human Development Index, what is evident is the substantial annual growth from 1990–2000 which is 0.55%. This essentially marks the structural changes that occurred post-1995 which marked a new era of development for Qatar and further marked the establishment of the Qatar Foundation. From 2000–2010 the annual growth of the Human Development Index was 0.40% which is significant and demonstrates the radical reforms to the education system that happened at the time. Last, 2010–2021 exhibited an annual growth of 0.23%, although the growth is not as significant as the previous decades. The last decade was challenging for Qatar on many fronts, primarily due to the overhaul of the education system in 2017, but also due to the influence of exogenous factors such as the imposed blockade and the global pandemic.

Figure 6.1: Qatar UNDP Human Development Index, 1990–2021



Source: UNDP

Another indicator is the Education for All Development Index (EDI) which is a Human Development Index developed by the United Nations Development Programme. The EDI is a composite index based on the four goals of Education for All, universal primary education, adult literacy, quality education and gender (UNESCO, 2020). Out of 205 countries globally, 115 countries only had the data required to calculate the standard EDI for 2011 and thus the countries are grouped into high, medium, or low EDI. Since 2011 there has not been an updated version, however, the index captures the essence of the educational development position of each state. The table below displays four countries out of the 115 countries in the data set, three of which are high EDI and one of which is a medium EDI, all four countries are oil-rich. The EDI is the index, and the other four components are used as proxies. The primary adjusted net enrolment ratio measures the proportion of children who are enrolled in either primary or secondary school. The adult literacy rate is used as a proxy to measure the proportion of the population aged 25 years old and older who have at least completed primary school. Kazakhstan an oil-rich state is ranked first, Norway the most notorious for oil wealth management is ranked eleventh with varied scores in the other components especially adult literacy rate and Qatar is ranked fiftieth. Qatar and Saudi Arabia are the only Gulf States that are included. In fact, according to Davidson (2009, 150), the United Arab Emirates education system is unfavourable when compared to other Arab states and was ranked ninetieth out of 125 countries in the EDI prior to 2007. This could explain partially why it is no longer included in the updated version of the EDI.

Table 6.4: The Education for All Development Index and Components for 2011

		<i>Primary adjusted EDI</i>	<i>Primary adjusted net enrolment ratio</i>	<i>Adult literacy rate</i>	<i>Gender-specific EFA Index</i>	<i>Survival rate to grade 5</i>
<i>High EDI</i>	Kazakhstan	1	12	14	16	2
	Norway	11	21	42	14	6
	Qatar	50	64	51	62	53
<i>Medium EDI</i>	Saudi Arabia	66	54	73	81	63

Source: UNESCO (2011)

In order for such rankings to exist the state must have reformed its educational institutions in a way that they are able to deliver the results that they are able to reap today. To paint a more dynamic picture of the institutional developments in education that took place it is important to explore the trajectory of education post and pre-oil. To deconstruct the normative narrative of the resource curse it is essential to analyse the history of education in Qatar with a linear chronological approach. This will allow for an analysis that explores the key achievements along with changes in policy that took place. The approach is intended to reflect the reality of the socio-historic phenomena that elicit the outcomes of education as it is today. Another important factor is whether visions such as the 2030 vision and other policy implications have been met. It is through such factors that a meaningful understanding of the development of educational processes can be achieved and a withdrawal from the misconceptions associated with resource abundance can be reached.

6.4. History of Education in Qatar

Qatar knew the first form of education in 1952 when the first formal state-funded school was established. Although oil was discovered in 1939, World War II prevented the exploitation of oil, in fact, in 1942 oil operations completely stopped. The first major oil shipment did not happen until 1949. Before oil exploration in Qatar education was controlled within lineage groups, where boys were taught the basics of writing and reading at an informal local school in the neighbourhood and girls learned to read and write at home. Education at the time served the needs of the period. When Qatar experienced its first substantial growth in trade, from its once-dominant pearl trade, the lineage group's form of education was no longer able to address the needs of the society. This pushed for structured education based on a firm foundation, methodology and subject matter (Al-Khouli, 2012: 227). A modern form of education became a necessity.

After oil discovery and especially after the rents of oil were reaped, substantial care was given to education. According to Al-Khouli (2012: 230), the Ottoman Empire that ruled over the Islamic world at the time did not consider education as a fundamental sector. Furthermore, following Ottoman rule, Qatar became a British protectorate until its independence in 1971. Contrary to what Britain had established in terms of educational policy in Egypt and India, it did not extend this to any Middle Eastern state. In fact, Al-Khouli (2012) notes that it seemed that education backwardness was methodical. Such processes were shaped by the colonial-era of transfusing knowledge and creating a form of reliance where the occupied would also be dependent on the coloniser for knowledge know-how. In order to further understand the establishment of education and its importance it is crucial to highlight that before the emergence of oil, health and education were not the responsibility of the state, they were rather under the umbrella of Islamic endowments and wealthy merchants.

The Qatari education system began to be the initiative of the ruling power casually in 1913 when an Islamic scholar was summoned to take care of the basic educational needs of the society at the time. However, it was not formally addressed by the establishment of a school until much later. Without tracing the development of education and the trajectory that led to certain establishments the true foundation of education and whether human capital development is fundamentally taking place cannot be reached. Therefore, a contextualisation of the education journey in Qatar is important to deconstruct the resource curse implications in

regard to education. So far, it can be understood that prior to oil-wealth, education was not in fact the responsibility of the state but rather a charitable form of civil society. The efforts of the ruling class to introduce some form of basic reading and writing was in fact, a personal effort at a time when constructions and challenges from Ottoman and British occupations did not encourage or welcome education. After the discovery of oil, however, the ruling class had rents that it could distribute and therefore, through state-building great importance was given to education. Despite the rentier model's assumptions that such forms of education are state patronage, Qatar's overall education trajectory paints a different picture.

The early 1970s witnessed an acceleration in educational reforms. It was an instrumental period in creating the basic foundations of a systematic curriculum structure (Fromherz, 2012: 153). The effort to consolidate education and create a modern pedagogical curriculum was pushed for until the early 1990s. However, education had a massive and reformed outlook after 1995. In fact, after 1995 the importance of quality education was magnified, and human capital accumulation efforts were founded. The next section analyses the makings of 1995 in detail and highlight how such changes have transformed Qatar from a textbook rentier model to a post-rentier state.

6.5. Re-Inventing Qatar's Education System

Education entered a new era of rapid modernisation with the assumption of power by the former Emir Sheikh Hamad in 1995. Where he took a personal interest in educational reform in Qatar. In 1995 Qatar Foundation a semi-private institution that is oriented towards education, research and the overall advancement of domestic human capital was founded. Under the umbrella of Qatar Foundation lies Education City founded in 1997, which is fundamentally the most substantive educational institution established in the state. In retrospect, the founding of Education City and laying the foundations for a future aimed at quality education revolutionised the educational sector in Qatar.

Reforms to the educational sector continued to the early twentieth century when a large-scale public educational reform happened in 2001. In fact, scholars observed such changes, Ibnouf, Dou, and Knight (2014, 44) claim that the educational sector in Qatar has been under the influence of rapid development and reform in a 'top-down approach' in 2001 a western-style K-12 education system was implemented. This was in response to a greater awareness of the

weaknesses in the educational system and the absence of performance indicators that could reflect students' achievements, educational attainment, and success in the labour market (Donn & Manthri, 2010: 50).

Qatar's educational system was under great scrutiny, as Romanowski et al. (2013, 109) note that there was concern that the current educational system was 'not producing high-quality outcomes' when benchmarked by international league tables. In order to respond to such malfunctions RAND a research organisation was commissioned to conduct a critical analysis of the Qatar K-12 education system that was in place. The research undertaken by RAND was called 'Education for a New Era'. The research highlights that the current Qatari 'education system was not producing high-quality outcomes and was rigid, outdated, and resistant to reform' (Brewer, et al., 2007: iii). RAND was requested to recommend options to address the state's changing needs. In fact, they state that Qatar 'was willing to consider radical and innovative solutions, and it was offering RAND a unique and exciting opportunity to help design and build a new education system' (Brewer, et al., 2007: xvii). RAND highlights four weaknesses in the education system: first, the education system lacked a vision of quality education and the structures required to support it. Second, the curriculum in the government schools 'was outmoded, under the rigid control of the Ministry of Education, and unchallenging, and it emphasized rote memorization' (Brewer, et al., 2007: xviii). Third, there was a lack of performance indicators, and it was difficult to rectify such challenges due to the lack of coordination with the top-down approach. Fourth, educators' pay was low, no professional development was provided to polish and improve skills and school buildings and classrooms needed to be improved.

The main aim of such reform initiatives was to modernise the education system as well as align domestic education with international education systems. In fact, Donn and Manthri (2010, 49) note that Qatar has tried to replicate successful education systems such as those in Singapore and Canada. Along with the RAND recommendations, the outcome of the reform was to decentralise what was known as governmental public schools and transform them into Independent Schools, which followed the charter school model. The first cohort of Independent Schools was established in 2004 consisting of twelve schools, with the ultimate goal of setting the stage for a world-class education system as part of Qatar's vision of developing its education system (Romanowski et al., 2013: 109).

In 2010 there were no longer governmental schools, but all the public schools were transformed into Independent Schools, which were publicly funded but privately operated schools. The aim was to promote creativity, autonomy, variety, and accountability. Educational methodologies and curriculums were independent of each school and there was no government-centralised control over essential subjects, while English language, mathematics and science were all part of the curricula. In an interview with Kanoria (Interview, 2020) who is the Director of Innovation at Education Above All, a Qatar-based foundation working towards quality education access for marginalised children across the world. Kanoria explained how the Independent Schools took on a similar approach to what are known as charter schools in the US. Kanoria highlighted three points she believes Qatar is trying to achieve in regard to education: Qatar is trying to raise the perception of education while raising the profile of teaching and thus providing role models.

The reforms that were taking place did not just focus on schools but on higher education. The most profound change in higher education has been under the auspices of the Qatar Foundation. From 2001–2005 Qatar established eight international branch campuses of US and European universities. It is not a common matter that world-renowned universities establish campuses outside of their home country, although there are a few examples, however, in the case of Qatar, we witness eight universities each renowned for their education standards providing higher education in a vicinity known as Education City. The establishment of these universities is exceptionally unique and can be considered an innovation in the area of International Branch Campuses (IBC) as prior to Education City no examples of multiple IBCs all under one umbrella existed. In fact, Crist (2015, 94) states ‘Education City is a completely unprecedented development in the field of IBCs and global higher education’.

The introduction of such a form of higher education into the educational mix foretells that the quality of education is at the forefront of educational reform efforts. Inviting world-class institutions such as Georgetown University, Weill Cornell, Northwestern University, HEC Paris and others ‘will intensify the competition for local and foreign students and academic staff, and consequently service quality’ (Sharif & Kassim, 2012: 36). Furthermore, the universities that were established were unique in their fields of study, providing specialities that they were profoundly revered for and areas of study that were needed in the State of Qatar. This is crucial for employment levels and whether the education provided translates into appropriate jobs in the labour market. Sharif and Kassim (2012, 36) highlight that Qatar was

not simply embarking on an educational initiative, but rather wanted ‘to change society through higher education’. In fact, other states in the Middle East have tried to establish IBCs in the same way Qatar has. Ulrichsen (2012, 101) notes that to a certain degree, Abu Dhabi has emulated the Qatari approach within the framework of its Abu Dhabi Economic Vision 2030. For Abu Dhabi, the promotion of a new knowledge-based economy involved introducing top international universities to operate on its land (Davidson, 2009: 157). However, it has not been able to directly host the number of universities Qatar has been able to establish and has only successfully established two international universities namely Sorbonne University in 2006 and New York University in 2010. When trying to deconstruct the reasoning behind why other countries in the Middle East such as the United Arab Emirates have not been as successful in establishing such forms of educational institutions, assessing the funding of such institutions provides a better understanding. Although both countries invested in higher education, they both followed different funding strategies, where in Qatar the transaction costs are funded by the government, in the United Arab Emirates, the funding was a symmetrical financial responsibility as the university branches were expected to cover their own costs – which led to a failure in the establishment of George Mason University in Dubai when student numbers and revenues failed to cover the costs (Romani, 2009: 4).

6.5.1. Out With the New, in With the Old

The reforms that have been introduced in the beginning of the twenty-first century have been proactive measures without a doubt. Qatar has tried to introduce new schooling methods as well as host international universities to launch their programmes on their own soil. However, it is important to highlight the implications of such reforms and how such reforms have unravelled. The schooling system known as the Independent Schools was actually a policy recommendation as part of RAND’s assessment of Qatar’s educational system. The Independent Schools did not prove to be effective or suit the needs of the students, in fact, they created discrepancies in the quality of education across schools. This is expected as the Independent Schools allowed for schools to operate with more autonomy having their own curriculum and teaching methods. After having operated for more than a decade the Independent Schools were not providing the promises of improving students’ overall performance especially when it comes to subjects such as math, reading and science. Improving standards of education and human development is a top priority which is highlighted in the

National Development Strategy 2017–2022 (Stephens, 2016). In 2017 a new law was introduced to overhaul Independent Schools and take a more centralised approach to education by returning back to the former public school system (Doha News, 2017). The law stipulated that the Ministry of Education and Higher Education regulates public schools, appointing administrators, and academic staff; the ultimate aim is to improve the quality of education in a way that promotes creativity and scientific excellence (Gulf Times, 2017).

The quality of the education system being a subject of concern and discourse publicly is not a subject matter that is common or expected of a rentier state. The common assumption associated with the rentier state model is an educational system that lacks any form of quality but is rather there to fill a void. The desire to reform the education system and then monitor and act accordingly in the name of advancing its knowledge-creation capacity by developing the education sector (Donn & Manthri, 2010), does not follow the dynamics of the textbook rentier state. In 2008, the General Secretariat for Development and Planning in Qatar established the Qatar National Vision 2030. The Qatar National Vision 2030 addresses the importance of education and the aspirations towards a knowledge-based economy, in fact, it states, ‘Qatar aims to build a modern world-class educational system that provides students with a first-rate education’ (GSDPQ, 2008: 13). The Qatar National Vision 2030 rests on four pillars: Human Development, Economic Development, Social Development and Environmental Development, where Human Development is listed first among the four pillars. Therefore, the assessment of education reforms is a crucial part of maintaining the objectives of the National Vision. It is not simply a matter of reforming educational systems but also making sure the reformed system is giving the results that it promises.

After ten years of having established the educational reform, ‘Education for a New Era’ the Independent Schools no longer served the students in the way that served the development of their human capital. Two explanations for the problems and challenges of Independent Schools can be deduced. The first explanation comes from an institutional miscommunication from the schools to the Supreme Educational Council largely due to the function of each school as autonomous. The second explanation comes from the school leaders and the teachers who were given too many responsibilities, such as the need to attend training courses as a requirement for existing and new teachers, which was a burden to existing teachers and took away from the actual teaching that was required from their end. When the Independent School system was no longer working some school operators claimed that the Supreme Education Council tried to

prolong the Independent Schools, in order to show that the system was successful ‘at the expense of quality education’ (The Peninsula, 2013). In fact, a school operator states that the Independent Schools bred a form of complacency among the students and parents, who assumed that examination pass rates were high; Dr Al Emadi, an education expert notes that school curriculums should be centralised and not left to the discretion of Independent Schools (The Peninsula, 2013). In a Qatar local newspaper, The Peninsula (2013) a university professor highlights that the main reason for the failure of the Independent School system is the introduction of the system without having been piloted, which would have given a better perspective of the negative and positive aspects associated with the reform. He further extends his claim by highlighting how this is manifested through the dropping out of students from Qatar University who were a product of the Independent School system. Others such as Opfer Vice President and Director of RAND Education and Labour noted that ‘too much change had been implemented too quickly for the system and its personnel to adapt’ (Alfadala, 2019: 11). In an interview conducted with Alfadala (Interview, 2022) who was an associate policy analyst at the RAND-Qatar Policy Institute, she highlighted that the Independent School reform was a top-down approach, however, the need is for a bottom-up approach, which involves including teachers and educators in the codesign of teaching and learning in the reform process. She recognises that although at times a top-down approach is needed, however, a bottom-up approach provides meaningful and practical implementation of reforms.

The educational reforms at the preparatory and secondary levels were substantive changes; one scholar described them as ‘a quantum leap and a courageous step forward’ (Nasser, 2017: 14). However, in order for such substantive educational reforms to work their establishment in the population should be meticulously studied. Change is desirable; however, its existence has to fit within the wider dynamics, only then can change be fruitful. Nasser (2017, 15) notes that the charter-like model of the Independent Schools ‘was so abrasively none contextualized and out of touch with the cultural and contextual realities’. The adaptation of a completely foreign educational strategy was austere in light of the reform that imposed an educational methodology that was foreign and sudden. A gradual and more synchronised education system with new streams of educational options and a cohesive K-12 educational system linked to the higher education future of the students may be more fruitful, especially since the monitoring and evaluation are undertaken by a single body and are no longer at the discretion of each school.

Although Qatar has had its share of learning from its reforms, the very fact that it acknowledges that an educational strategy is no longer doing its job and replacing it accordingly sheds light on the efforts of improving the educational quality at hand. The common rhetoric of the resource curse does not acknowledge that resource-rich states consider education as a crucial sector for improvement, let alone efforts to improve its quality. Qatar has carved its development path in order to situate Qatar within a broader global market at the cost of enduring the challenges that may surface as a result (Nasser, 2017: 15). Focusing on educational reforms begs the question of whether such reforms to education are translated into job market needs.

6.6. Satisfying the Labour Market Needs Through Human Capital

Educational initiatives, reforms, and development in the production of educational institutions are not created in a void but must be interlinked to the institutional needs of the labour market. The alignment of educational attainment with the labour market is crucial. For educational systems to exist an enabling environment is required but also a shift in the approach work and education are conceived. Educational attainment must be interlinked to the labour market needs, in order for an effective utilisation of human capital development. This requires that a cultural valuation of the importance of knowledge and human capital development exists but also a deconstruction from the standard top-down approaches that simply build institutions to accumulate human capital, to a bottom-up approach which opens up job markets to cater to the human capital developed. This also requires for an oil-rich state to address the rentier model approach that builds physical capital and human capital without creating efficient factors of production to cater to the newly developed human capital.

In neoliberal economic policy, human capital ‘represents a subtle masking of social conflict and expresses metaphorically the commodification of human abilities and an alienating notion of human potential’ (Holborow, 2012, 93), both of which do not reflect the aims of education. This comes from the view that education is used as an instrument of creating a labour force in order to cater to the needs of the capitalist economic system. A study by Sukarieh and Tannock (2020, 80) traces the claims of the concept of deschooling which is driven by a neoliberal model of educational policy reform ‘in which the core purpose of education is narrowed to serving the needs of the marketplace, and the marketplace provides the key tools and structures for

reorganising formal systems of education’. They highlight the problematic nature of such a neoliberal model of education and the need to challenge the concept that ultimately leads to exclusions. The need for education to be synced with the labour market addresses the neoliberal perspective of catering to the needs of the market through educational institutions. As Sukarieh and Tannock (2020, 81) highlight ‘what is essential is not just the particular forms, processes and location of educational practice, but the broader political agenda and ideological visions to which this practise is being harnessed’. Therefore, the educational reforms and overhauling of educational systems as discussed earlier, represent a dynamic process of change that is much more meaningful than the neoliberal forms of education that dismiss the complexity of knowledge and how educational institutions operate.

Institutional developments in education are agents of change in societies. They represent more than just an increase in human capital development. Therefore, the aim should not be to contain such educational developments within institutional borders but to reflect such developments on the job market. In order to embed research developments in the labour market, in 2006 Qatar established the Qatar National Research Fund. The fund believes that through research natural resources can be utilised as efficiently as possible (Qatar National Research Fund, 2022). The collaborations between international institutions and the public and private sectors make the fund a dynamic place. Although the fund does align with the state’s national vision, the fund’s research focuses on two sectors namely health and the environment. Therefore, the exchange of knowledge between actual human capital and the labour market is confined to specific fields. What must be realised is whether the educational institutions have translated into economies of scale for both the research and the labour market. In order to recognise whether educational reforms and the expansion of higher education deliver productive means.

When analysing state institutions and the dynamics between human capital development and whether that is translated into job market needs, it is important to scrutinise the social mentality of the population, especially when certain social norms are entrenched into social behaviour due to the rentier mentality. It is crucial to highlight the different factors at play and not view institutions as enclave models, but rather as dynamic institutions that are affected by the social dynamics in the country in which they operate. Further, rentier mentalities can very often undermine the work ethics of society, due to the very nature of government distribution of resource wealth. Therefore, reforming educational institutions and investing in higher education alone is insufficient if it is not reflected and directly linked to professional

advancement in the workplace. According to Ulrichsen (2012, 110), the changes that are made to primary and secondary educational systems ‘need to be integrated into structural reforms to labor markets’ and it is only through such dynamic processes of mutual engagement that the benefits of knowledge creation can be reaped. Furthermore, the rentier mentality can be addressed in a constructive approach, in fact, in a study by Hertog (2020, 6) the rentier mentality dynamics are tested for a range of Gulf States and the results show that although aspects of rentier mentality are ubiquitous, ‘attitudinal predictions of rentier state theory do not hold up – potentially because rentier states have adapted since the 1980s and used a range of social engineering tools to instil pro-business and patriotic beliefs on an abstract, ideational level’. He attributes such forms of social engineering to education playing a substantial role in creating value to implications that are not viewed as typical to rentier state theory but acknowledge that research is still needed in order to investigate how and why such attitudes exist. Therefore, it does not only suffice to develop educational institutions without ensuring that they are in sync with the labour market. Only after ensuring that the demands of the labour market and educational systems are met can this alter the rentier assumptions associated with rentier mentalities of low achievements and passive citizenship (see Hertog, 2020; Kropf & Ramady, 2015).

The significance of the rentier mentality is embedded in the rentier state theory and the ideational attitudes that consequently occur in relation to educational attainment and job aspirations. Therefore, it is important to evaluate whether the educational developments do in fact cater to the needs of the labour market. Along with providing a conceptual understanding of the effects of human capital development on the labour market and whether the two are in collaboration. This also directly adds to the narrative of resource-rich states and assesses whether almost three decades after the concept was coined the rentier dynamics associated with resource-rich states are still present. According to Kropf and Ramady (2015), oil wealth has profound implications on the participation of citizens in the job market and career motivations, they use surveys to come to the conclusion that some oil-rich Gulf States citizens fail to understand the requirements of the private labour market. This ultimately leads to a mismatch between the qualifications of graduates and the requirements of the labour market. The volume by Kropf and Ramady provides insight into career motivations and the challenges associated with the labour market with a focus on Oman and Saudi Arabia especially. Another volume by Jones (2017, 48) focuses on the United Arab Emirates and burdens rentier attitudes to wealth distribution policies along with the creation of jobs guaranteed to the citizens. In fact, Jones

suggests that the social engineering of citizens that the UAE has attempted through the establishment of elite schooling has only reinforced the rentier arrangements. The study is rather specific and explores particular institutional contexts while relying on ethnographic evidence that is very case specific to construct conclusions about a particular demographic.

Other structural challenges are centred around a dominant and highly skewed public sector while incentivising educational attainment. This is largely because high work-oriented jobs are annihilated by structural impediments. Therefore, in order to dampen the effects of such structural challenges investing in education and higher education are critical but lacks purpose if the job market does not absorb the developed labour. Furthermore, some scholars such as Ulrichsen (2012) raise the question of whether rentier mechanisms of governance impede educational reforms, along with the restructuring of the labour market, organisational structures, and human capital development. Although studies that have researched the United Arab Emirates have concluded that rentier dynamics are very strong and thus many educational developments have proved insufficient or unable to fully demonstrate momentum, it is unsound to conclude that rentier mechanisms of governance impede educational reforms. Instead, the focus should be on demonstrating the effectiveness of reforms and the role of institutions in creating a synced network between education and labour market needs. In a study that focuses on Kuwait and the knowledge economy Brinkley et al. (2010, 4) highlight that in order ‘to create Kuwait-specific comparative and competitive advantage, adapting the best not only from other Gulf States but from other countries’ would ultimately underpin the effectiveness of any reform.

6.6.1. Syncing the Labour Market

Qatar was an early mover in the direction of educational reforms, in comparison to other neighbouring countries in the Gulf. The Qatar Foundation which was established in 1995 was the first step in the direction of human capital development that focused on quality education – building up an institutional foundation in order to establish world-renowned educational institutions into its realm in the future, in line with identified national visions and its developmental trajectory. The aim is to integrate such educational stakeholders with the labour market and the business landscape. In order to first achieve that a top-down approach needs to be directed to create momentum for reform and to direct the needs. However, after the top-

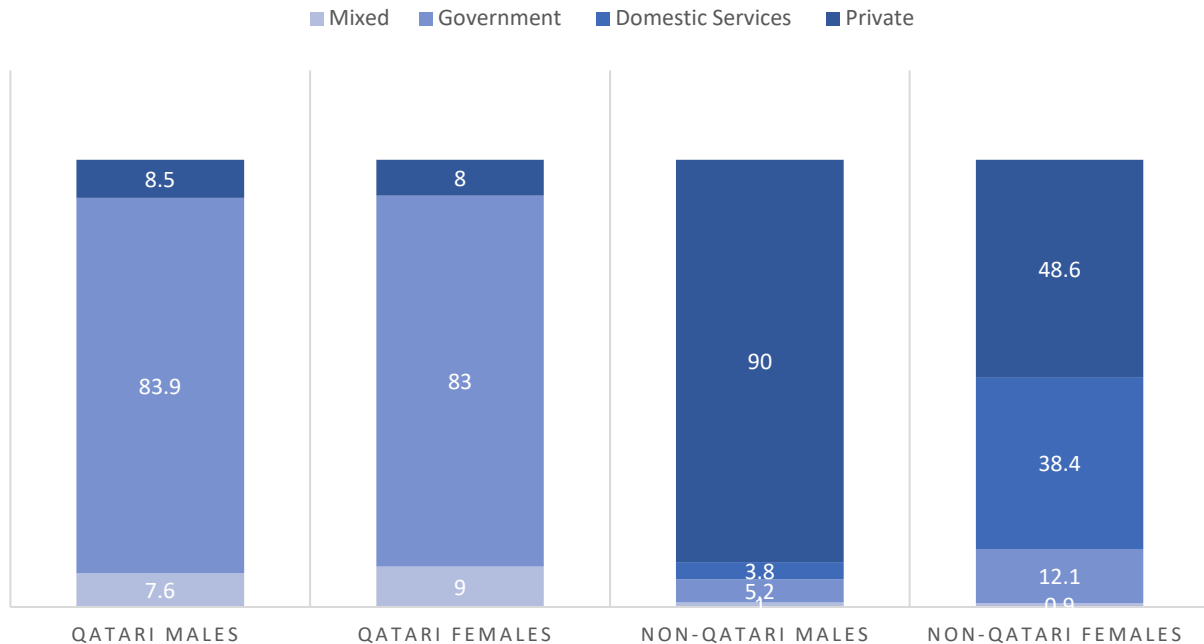
down approach has done its part in creating the linkages and the basics for execution, a need for a bottom-up approach is what leads such developments to truly be of any significance. This not only addresses the issue of silencing the population that has constantly been used in the rentier narrative it shifts the dynamic to a value-driven economic model.

To begin, the educational reform that were established by the recommendations of RAND uncovered numerous challenges that needed to be addressed, including the rigid educational structure of the past, teaching professionals' development needs and an urgent need to dissociate from the rote-learning method that only discouraged innovation. Although fundamentally the recommendations of RAND were replaced in 2017, they were first established in order to account for the challenges and reform education to fit with the needs of society. Another study undertaken by RAND uses Qatar's 2004 census data underscored that there was a misalignment between patterns of education and employment, which was especially true for young Qatari males (Stasz et al., 2007: xv). The study recommends a well-rounded strategy that incorporates the different education 'institutions and considers related policy areas, especially those of employment and labor' (Stasz et al., 2007: xx). The study was conducted in 2007, Qatar has since reformed its K-12 educational system to a decentralised Independent School model by the recommendations of RAND, who believed that such a model would address the challenges associated with a rigid educational model. This educational reform has since been overhauled as discussed earlier and an educational system has been put in place that addresses the weaknesses of the Independent School model.

Although oil-rich states are seen to have a unique employment pattern skewed highly towards the public sector, which is essentially viewed as the rentier relationship that bonds citizens to the government (Winckler, 2009). They exhibit strategic plans that differ in implementation and are markedly different in population size and therefore wealth distribution. Therefore, reforms of any kind differ depending on the rents available to policymakers, which could speed the transition to a post-rentier political economy. Reforms to the education system and bolstering higher education consequently have to be aligned to the labour market and pertain to the knowledge sectors that are developed in the educational institution, which need to be underpinned by systematic changes to the labour market. The Ministry of Labour in Qatar states clearly in its strategic plan 2018–2022 that 'The Ministry's efforts are complementary to those of the Ministry of Education and Higher Education, Universities and Qatar Foundation

in linking education outputs to the needs of the Qatari labour market, especially in private sector institutions and companies to which the State contributes' (Ministry of Labour, 2022).

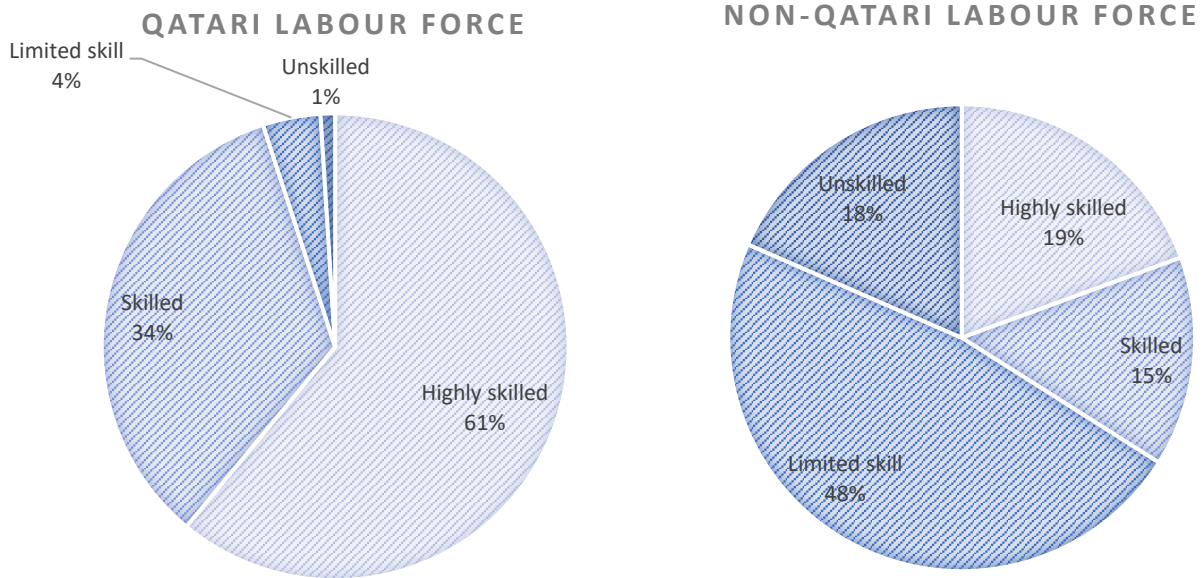
Figure 6.2: The Relative Distribution of the Labour Force (15 Years +), for 2020



Source: Qatar Planning and Statistics Authority (2021)

To understand the dynamics of the labour force, the distribution of the labour force is presented in Figure 6.2. Around 80% of the labour force work in the private sector, whereas only 10% occupy the public sector (Qatar Planning and Statistics Authority 2021). While the private sector employs the majority of the labour force the Qatari labour force did not exceed 8% of the private sector employees, while the Qataris employed by the public sector occupy 84% of the total Qatari labour force which is a substantial amount and a common observation in a rentier state. The desirability of public sector jobs is related to the de facto tenure that they provide (Salehi-Isfahani, 2006: 186). The skills of the labour force, however, are a crucial factor in identifying the types of jobs being occupied. According to the Qatar Planning and Statistics Authority as of 2020, nearly three-quarters of the Qatari labour force is highly skilled and held senior professions and technical positions, whereas the percentage of non-Qataris with highly skilled jobs did not exceed 19% (Figure 6.3). Highly skilled jobs include legislators, senior officials and managers, professions, technicians, and associate professionals; while skilled include clerks, service workers, vendors, and agricultural and fishery workers; limited skill jobs include craft and related trade workers and machine operators and unskilled are all those under elementary occupations (Qatar Planning and Statistics Authority, 2021: 13).

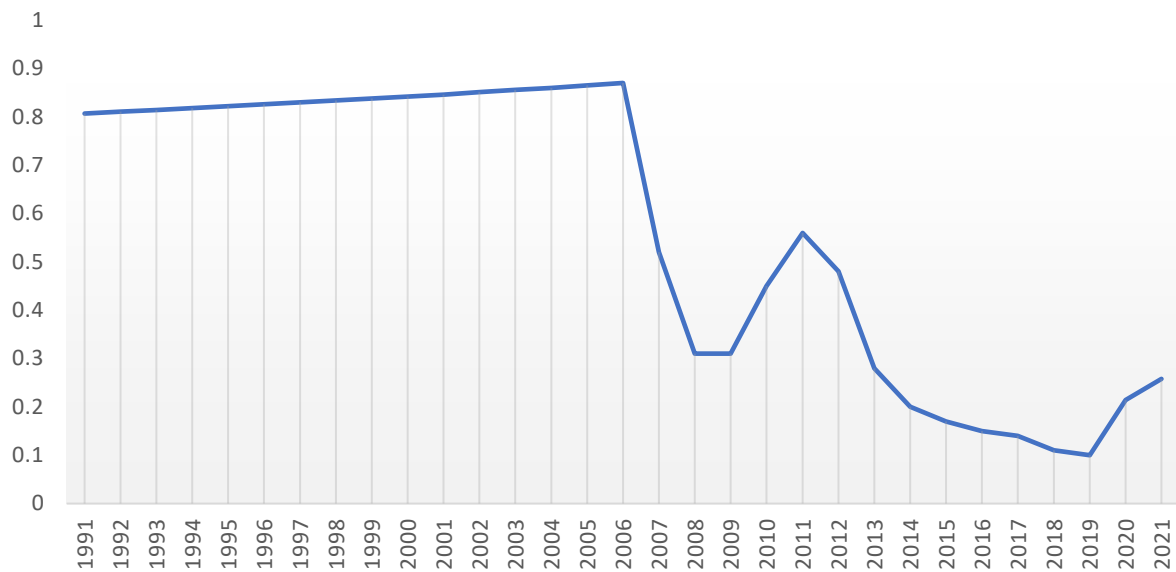
Figure 6.3: The Labour Force Relative Distribution by Skill Level, 2020



Source: Qatar Planning and Statistics Authority (2021)

Furthermore, it is important to highlight that the highly skewed public sector job occupancy by the Qataris could decipher structural challenges that should be addressed. Although the unemployment rates are astonishingly low at 0.26% (World Bank, 2021f) which is considered the lowest worldwide (Figure 6.4), important implications can still be drawn for why certain individuals are unemployed and structural deficiencies that can be articulated. Yet, it must be noted that the unemployment rate has been remarkably low reaching an all-time low of 0.1% in 2019 (Figure 6.4).

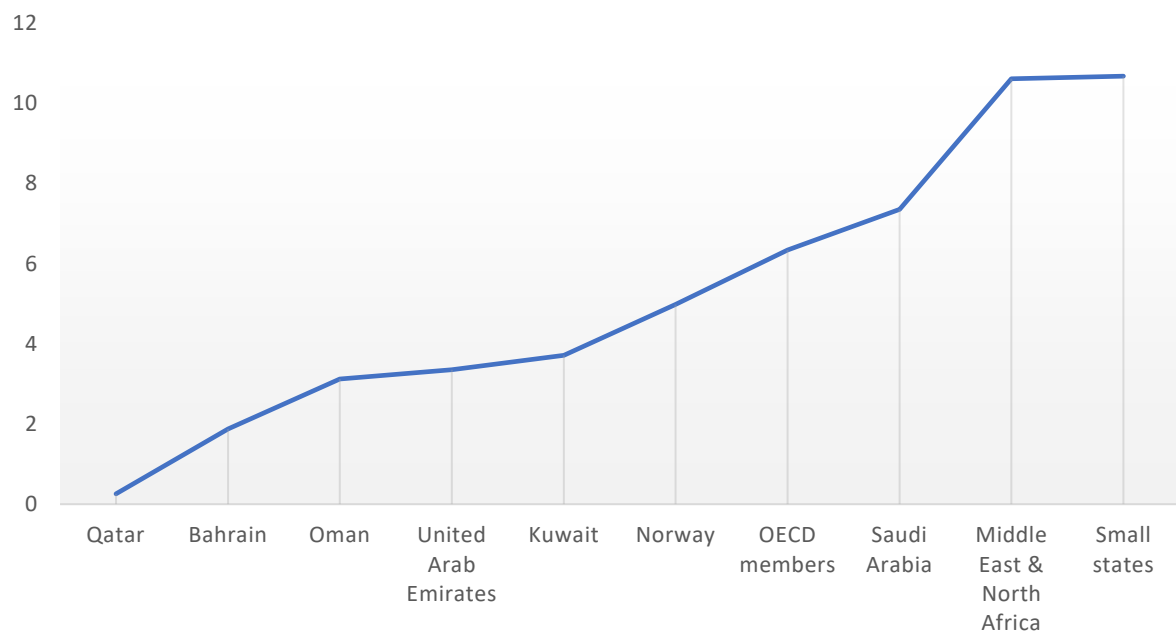
Figure 6.4: The Qatar Unemployment (% of total labour force)



Source: World Bank (2021f)

The unemployment rate of Qatar against other Gulf states is depicted in Figure 6.5. Furthermore, in order to give a clearer picture of the position of Qatar in relation to other countries, other indicators are included, examples include OECD members, MENA countries, along with Norway which has also been included as it is considered a blueprint model for oil-rich states.

Figure 6.5: The Unemployment (% of total labour force) in Gulf Countries for 2021



Source: World Bank (2021f)

The remarkably low unemployment rate may also be tied to the fact that Qatar is a small state, and for that, a small states indicator has also been included in Figure 6.5 to depict the average unemployment rate of small states and to demonstrate that size is not indicative of performance. From the survey sample of the Qatar Labour and Statistics Authority, a few interesting observations can be made in regard to the survey responses. First, 32% of the unemployed nationals showed interest in being offered a job in the private sector. Second, the causes for unemployment among the Qataris highlight significant challenges that although experienced by a relatively small number are in fact important to address and could be an opportunity for policymakers to tackle challenges from a bottom-top approach. According to the unemployed in the survey, a number of factors can be identified in regard to the causes of their unemployment; they believe that this is due to ‘lack of experience’, ‘lack of suitable work’ and ‘search for a better job’ (Qatar Planning and Statistics Authority, 2021: 19). Further, the causes for unemployment and not looking for a job are passive reasonings based of applying for a job and waiting for a reply. In addition, the high school graduates that were unemployed were unwilling to work in the private sector due to ‘low wage’, ‘working hours’, ‘social status’ and ‘gender mix’ but also 61% of whom were looking for a private sector job were not offered a job opportunity (Qatar Planning and Statistics Authority, 2021: 20).

Table 6.5: Reasons for Being Unemployed

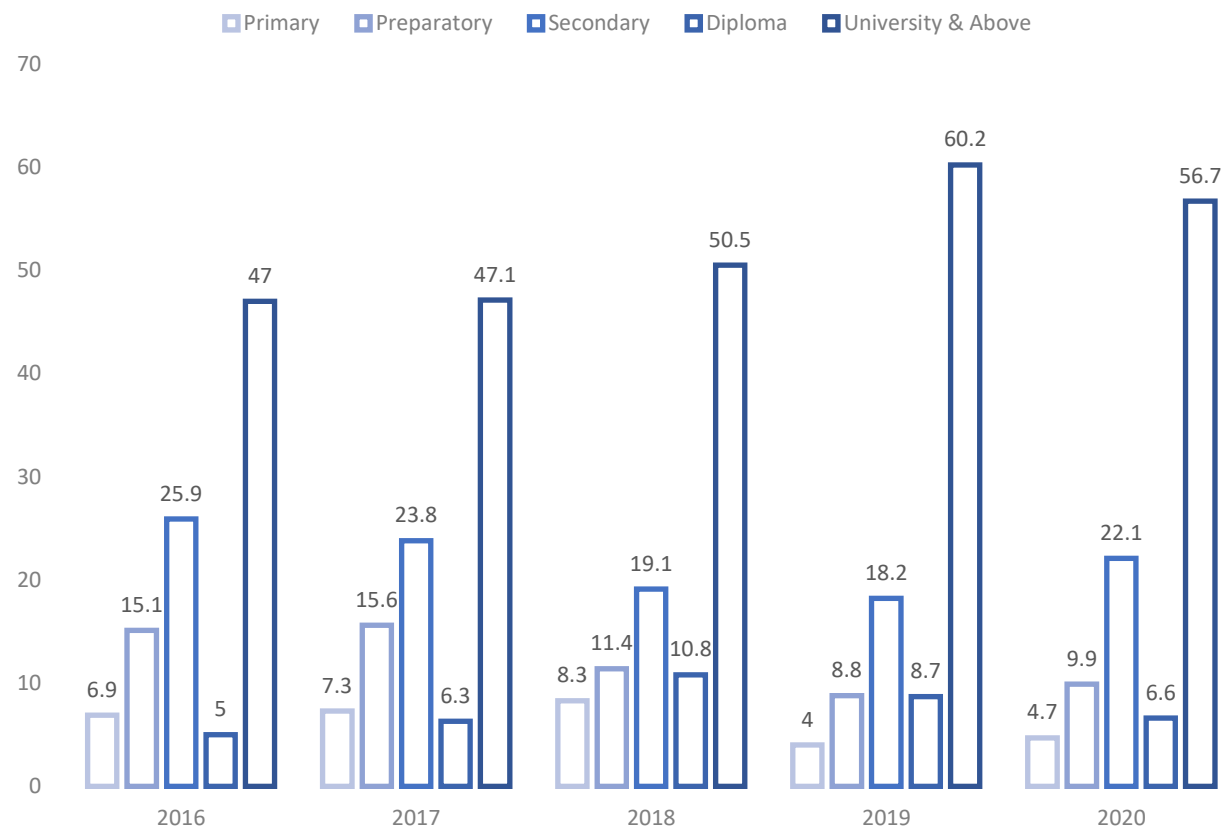
Reasons for not being interested in the private sector	<ul style="list-style-type: none"> Low wage Working hours Working days Gender mix Retirement benefits
Reasons for being unemployed	<ul style="list-style-type: none"> Waiting for results of job application Lack of proper educational qualifications Search for a better job Not believing in the availability of suitable work Lack of training and experience

Source: Author’s collation from Qatar Planning and Statistics Authority 2017–2021.

In order to gain a better understanding of the social and structural challenges an analysis of the reasons behind being unemployed or uninterested in the private sector has been compiled from the survey responses of the Qatar Planning and Statistics Authority over the past five years (Table 6.5). The majority of respondents that were uninterested in the private sector were concerned about pay, working hours and days while others were concerned about pension

funds. Therefore, it is obvious that the major factor behind Qataris' low contribution to the private sector is money related. To encourage private sector employment the private sector could introduce competitive wage schemes for instance. Another structural problem that is evident from the responses resides in the lack of awareness of what to do after applying for a job. A large number of respondents apply for jobs but end up waiting for replies, while others believe that they lack the qualifications needed and are discouraged from applying. Although when assessing the distribution of unemployment by educational status (Figure 6.6) the largest percentage of unemployed actually have a university degree or above. Figure 6.6 presents the distribution of unemployed individuals by educational status. Since 2018 there has been a significant increase in the unemployment of individuals with a university qualification.

Figure 6.6: The Percentage Distribution of the Unemployed (15 years +) by Educational Status from 2016–2020

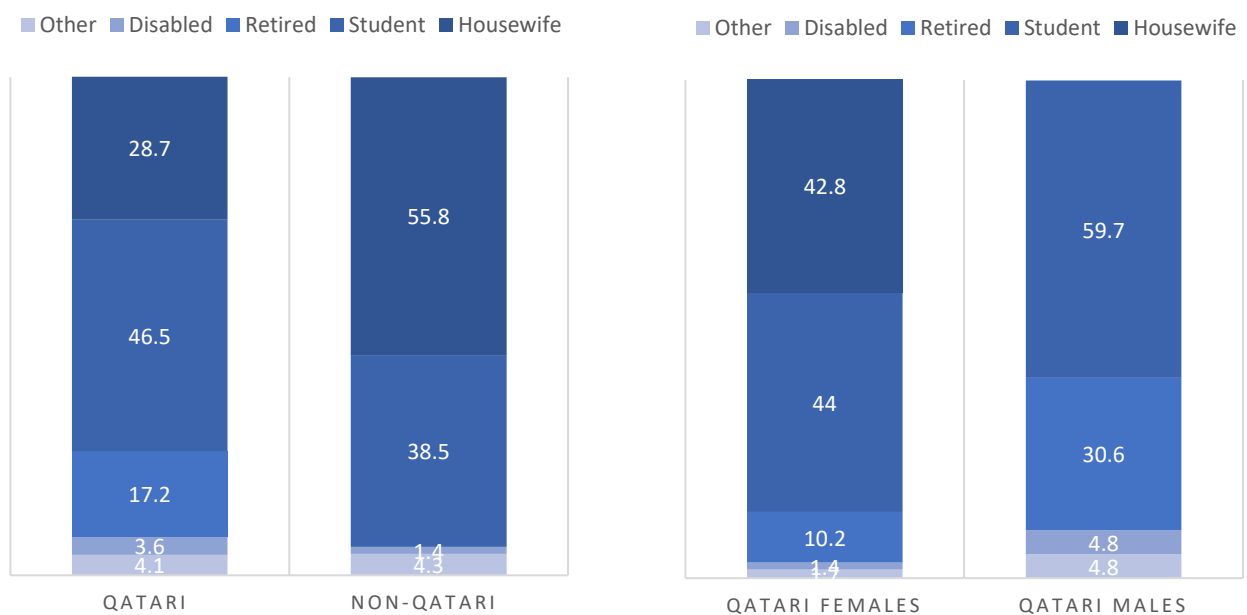


Source: Qatar Planning and Statistics Authority (2017–2021)

In reality, the unemployment rate in Qatar is no issue, however, the distributions can provide an understanding of the demographic, and when combined with the reasons for unemployment provided in the survey by the Qatar Planning and Statistics Authority, they can help decipher a better understanding of the social dynamics. Individuals with a university or above

qualification address three reasons for being unemployed. First, the ‘search for a better job’ is understandable for individuals that are qualified and considered as self-improvement and progression. Individuals with a university degree may have higher expectations when it comes to jobs and may not be satisfied with the job they are in or may be overqualified for the job and so the search for a better job is reasonable. Second, ‘not believing in the availability of suitable work’ raises the question of whether the job market is in fact synced with the qualifications at hand. Third, the ‘lack of training and experience’ – many university graduates do not have experience as they graduated from university without having the opportunity to work, this is especially true for individuals that undertake postgraduate studies and are ahead academically but have no training or work experience. In fact, nearly 50% of the total inactive population are students (Figure 7.7). Below, Figure 7.7 depicts the percentage distribution of the Qatari vs the non-Qatari inactive population. A breakdown of the Qatari population of males and females is included in order to capture the reality of the situation. A large number of foreign workers dominate the working population; therefore, it is necessary to provide a breakdown of the whole population and also one that focuses on the nationals that are in fact a minority. The non-Qatari labour force represents 95% of the total labour force as of 2020 (Qatar Planning and Statistics Authority, 2021).

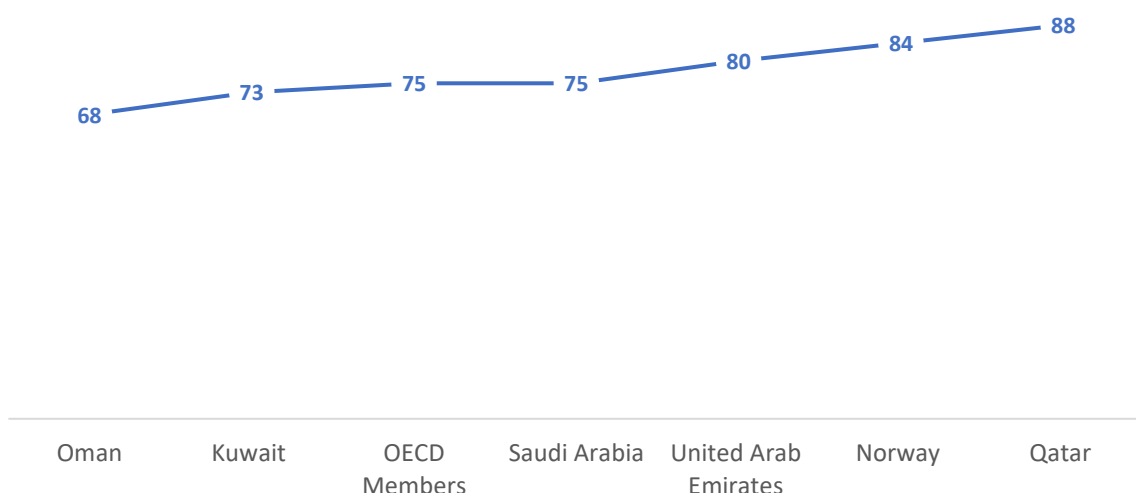
Figure 6.7: Percentage Distribution of Economically Inactive Population (15 Years+) by Nationality and Gender for Inactivity, 2020



Source: Qatar Planning and Statistics Authority 2021–2022

Yet, even when differentiating between the Qatari and the non-Qatari population who are inactive, nearly half of the population are students and 84% are students or housewives. When singling out the nationals 88% of them are students or housewives which is a minor difference. The educational focus is evident in the labour force with advanced education which represents the percentage of the total working-age population with an advanced education who are in the labour force (Figure 6.8). Therefore, the inactive population of students that constitute a large percentage of the inactive population are then reflected in the advanced educational labour force as shown in Figure 6.8. The percentage of the population that has an advanced education in Qatar is significantly higher than that of any of its Gulf neighbours and is even higher than Norway. Such statistics shed light on a significantly different narrative than that of the resource curse theory on education and the quality of the labour force in oil-rich states.

Figure 6.8: The Labour Force with Advanced Education (% of Total Working-age Population with Advanced Education)



Source: World Bank (2020c)

The Shura Council which is the council that follows up on the activities and the achievements of the government in all matters sheds light on governmental efforts to sync education with the labour market, which may partially explain the high percentage of the labour force with advanced education. The Shura Council stresses the ‘need to link education outputs to needs of the labour market’ and the importance of customising human resources in accordance with the needs of the labour market to promote inclusive national development and be in line with the Qatar National Vision 2030 (Qatar Tribune, 2022). The Shura points to an important factor that addresses the issue of private sector employment and directs the private sector and public

sector to partner together in absorbing job seekers while localising jobs in the private sector and partnering with universities and qualifying prospective job applicants for the labour market (Qatar Tribune, 2022). The state's national development vision considers an advanced Education and Training Sector Strategy as fundamental to the progress and development of not only the labour market but the overall human development of the population (Qatar National Development Strategy, 2018). In order to support the achievement of Qatar National Vision 2030 a series of other development plans were set in order to complement the overall achievement of the vision. Analysing the National Development Strategy 2011–2016 can provide insight into the outcomes of the strategy and what has come to fruition.

The main strategies that focused on aligning the labour force and human capital development in the National Development Strategy of 2011–2016 are presented in Table 6.6. An effort to match the labour supply and demand to the public and private sectors addresses the challenges of private vs public sector employment. However, in order to evaluate the strategies and whether they have been met an evaluation of the five main strategies will be analysed. The National Development Strategy 2018–2022 can provide answers to the strategies and whether they have been met and what needs to be done. First, a prerequisite to a productive and skilled labour force is one that participates in the private sector taking full advantage of the skill sets achieved through education. The proportion of Qataris in the private sector has increased from 7% to 12%; this has been addressed by increasing the benefits package in the private sector, to include benefits such as retirement coverage in order to make it more attractive and thus help incentivise employment in the private sector (Qatar National Development Strategy, 2018: 178). Second, increasing the participation of the Qatari labour force of men and women ages 20–59 with at least a secondary education was achieved especially by the age group 30–34 years with 95% while the youth aged 15–24 participation was 71% (Qatar Planning and Statistics Authority, 2017: 11). Third, the development of a regulatory framework to align the education sector with the labour market needs was addressed partially by the Labour Market Sector Strategy that was implemented in order to provide high-quality training programmes to the Qatari workforce. However, according to the Second Qatar National Development Strategy (2018, 178), the training that was implemented by the Ministry of Administration Development, Labour and Social Affairs was instigated with no clear plan for improving the skills of the private sector workforce and the progress in building skills was as a result modest.

Table 6.6: The Plans of the Qatar National Development Strategy 2011–2016 for the Labour Market

<i>Plan</i>	<i>Criteria</i>	<i>Procedure</i>
<i>Create a more productive and skilled labour force</i>	Requires major labour market reforms	Incentivising Qataris to participate in the private sector and to take advantage of higher education and training opportunities
<i>Expand high-quality training opportunities for Qataris</i>	Increase the labour force participation rate of Qatari men and women ages 20-59 with a secondary education or below	Skill upgrading programme for Qataris
<i>Develop a regulatory framework to align technical education and vocational training with the education sector and labour market needs</i>	Define and implement standards for a National Qualification Framework with all stakeholders Develop and implement a system of occupational standards for relevant professions	National Qualification Framework Occupational standards and oversight body
<i>Prepare Qataris for employment in the knowledge economy</i>	Increase proportion of students graduating with qualifications needed in the knowledge economy by 65%–75% Provide students with diverse post-secondary education pathways to meet labour market needs	Alignment between higher education and needs of a knowledge economy
<i>Labour force productivity boost</i>	Improve Qatar’s global ranking in labour productivity from 35 th to 29 th	Labour Productivity strategy

Source: Qatar National Development Strategy (2011)

Fourth, the aim was specific to the number of students graduating with qualifications in order to meet the needs of the knowledge economy, which was set at 65%–75%. Since the National Development Strategy was for 2011–2016, the numbers for 2016 will be analysed. The Qatari males with a secondary qualification or more were 79% while the Qatari females were 91%, together they were at 85% which is higher than the initial aim (Qatar Planning and Statistics Authority, 2017). In 2020 the percentage was at 90 which shows a great improvement as well as a progression committed to the overall 2030 Vision. Last, the aim was to increase the labour force productivity and improve Qatar’s global ranking from 35th to 29th this aim however has not been achieved. The Growth Promise Indicators (GPI) index ranks Qatar 34 out of 181 countries, situating it among the top 20% globally for potential growth; the indicator is based on macroeconomic stability, openness to catch-up, infrastructure, human capital, and institutional strength (KPMG, 2018). The key indicators in the index in fact comprise the many tenants of the 2030 Vision. The report considers the institutional strength indicator as the most important component of the GPI as high-quality public institutions enforce a robust regulatory framework with an overreaching business environment, which as a result leads to higher

employment levels and productivity (KPMG, 2018: 17). Qatar scored highest in the institutional strength indicator. The report further highlights that institutional strength is not dependent on high-income levels, where lower-income countries such as Rwanda and Bhutan have higher institutional strength scores than higher-income countries. Similar to how institutional strength is not dependent on income levels, resource riches do not dictate the path to human capital development when wealth is managed and distributed with a long-term vision in sight.

6.7. The Exposed Reality

Since the educational reform of 2001 by RAND concluded that the past educational system did not adequately provide students with the skills for tertiary-level learning, the education of the labour force has been at the forefront of development. The Education for a New Era reform was designed to improve the quality of the education system while leaving back what they described as a rigid and outdated system. The first Independent Schools that were established under the guidelines of RAND were in 2002, which consequently led to the establishment of the Supreme Education Council as the governing body of the newly established school system. An ambitious timeline to implement the change along with structural changes and professional standards for teachers' training was a radical transformation that not involved changes to the system but changes to assessments, governance, and accountability. Aligning the education system with a prospect for advanced tertiary education and the labour force is not a simple matter and the change occurred quickly for the students on the one hand and the educators on the other. The aim of the Independent Schools relied on pedagogical practices that were not only new but relied very much on a system that was trying to rid itself of an old rigid system while being flexible on matters of autonomy, but rigid on educators' development, which eventually led to the overhaul of the system.

Although the education system in Qatar is comprised of both private and public schools alongside international private schools, the public schools which are funded by the government and managed by the Ministry of Education and Higher Education constitute more than half of the schools in Qatar. Therefore, the reforms to the public education system are far-reaching and a factor that is considered unimportant to resource-rich states in the resource curse theory and rentier model narrative. Moving on to the tertiary institutions that have been established at

Education City that bring together prestigious universities from across the globe to operate in Qatar. Universities would be more synced with the labour market needs if they could collaborate with the private sector, this would also address the low levels of Qatari employment in the private sector. In an article by Oxford Business Group (n.d.), the academic dean of HEC Paris in Qatar stated that ‘there is a huge demand for executive management degrees in middle management in the market and also continuing education for upper management looking to transition between jobs or for salary increases’. HEC Paris provides postgraduate programmes to professionals and therefore satisfying the needs of individuals that want to progress their professional career through higher education is another form of advanced human capital development which could in fact also address likely mismatches in the labour market. Of course, this is only valid for jobs that need a higher qualification in order to progress, however, this does not address individuals that may be overqualified for the job and would require the job market to align with the qualifications at hand. Many of the efforts have in fact been focused on human capital development, such as Technical and Vocational Education and Training to increase the appeal of enhanced careers and address a mismatch in the job market. The importance of Technical and Vocational Education and Training lies in its ability to provide a diversified pathway to employment, satisfying the needs of the labour market while providing professional training (Oxford Business Group, n.d.). Furthermore, the Supreme Education Council (2011, 1) highlights the importance of advanced high-quality education and training that are aligned with the labour market. However, the labour market must also satisfy those who are qualified and are unable to find a job that fits their qualification and evaluate societal needs, after having focused on developing human capital, satisfying the skills that have been developed as a result is crucial.

6.8. Is It a Change in Rhetoric or Reality?

In this thesis quality institutions have been a vital force in the transformative and dynamic needs of oil-rich states. The resource curse theory in general and abstract terms is not adequate to address the complex processes and outcomes of oil-rich states and Qatar in particular. The developments and processes of oil-rich states are to a large extent case specific and very much dependent on the state’s development trajectory. Some states are able to utilise state institutions to their benefit and reap positive outcomes as a result, which rules out the inevitability of the resource curse theory and the inverse relationship it attaches to resource abundance and

economic growth. Assessing oil-rich states within a dynamic context, however, is more representative of the developments and institutional effectiveness of oil-rich states. The effectiveness of state institutions also becomes more prominent where lessons and examples can be drawn when oil-rich states are not grouped and classified as homogeneously cursed due to their resource abundance. The role of oil rents must not be undermined in facilitating the creation of the modern state and the emergence of such institutions, which were ultimately consolidated with oil wealth.

Oil rents do not predetermine choices or outcomes but as Hertog (2010b, 14) puts it ‘oil surpluses make unconventional institutional design possible rather than predetermine one specific trajectory’. Government policy ultimately determines the extent to which oil revenues can serve the needs of the state and incentivise human capital development. While in the past economic policy had been determined to consolidate the tradable sector against the non-tradable sector, largely influenced by lessons from the Dutch Disease model,⁴ the development of human capital has not been addressed. In fact, the division of the economy into sectors such as those in the Dutch Disease model has lost relevance, Salehi-Isfahani (2012, 150) explains how the development of human capital focused services such as finance and insurance render the assumption that tradable sectors are favourable while services are not irrelevant. Now, however, oil-rich states are faced with a new challenge, which involves the creation of jobs that are reflective of the educated national population with a higher reservation wage than in the past. Salehi-Isfahani (2012, 170) highlights that the rise of tertiary education in the Middle East has expanded public sector employment to university graduates, however, it has also been challenging for the public sector to absorb all potential job seekers, while the private sector employers are reluctant to fill the gap because of the high reservation wages of the educated job seekers. This is very much still the case in Qatar as even when Qatari job seekers show interest in the private sector, they are not offered a job opportunity. These challenges are structural in nature and need to be addressed in order to maintain human capital development and motivate the dispersion of knowledge creation in the economy. The development of organisational structures to support and guide prospective job seekers and the collaboration of educational institutions and the private sector is crucial. Improving domestic human capital only creates value if such individuals are actively participating in the field in which they have specialised. Therefore, human capital development is not an end but a means to develop

⁴ The Dutch Disease model is discussed in detail in Chapter Two.

institutional structures and promote organisation development, which prevents the stagnation of institutions but promotes constant progress to keep up and maintain the source, which is human capital development. This is very much the opposite of the resource curse narrative, which attaches an archaic, definitive, unchangeable state of affairs to the resource-abundant state.

The limitations of philosophy and theory can be addressed by institutions that can offer a differing approach to the claims of the theory. This does not mean that the resource curse theory is fundamentally flawed, but rather, it means that oil-rich states have moved beyond the assumptions of the theory and so Qatar cannot be explained by the same classical paradigm of resource abundance. The desire to place all oil-rich states into a manageable and unchanging dynamic is problematic and does not reflect the development prospects of any global state. Such a simplistic approach to dealing with oil abundance must be avoided. What is particularly problematic is the oblivious nature of the assumptions of the resource curse theory, which must be eschewed.

7. Rethinking the Resource Curse – Final Thoughts

Over the past two decades, oil-rich states have proven themselves in the global economy in unprecedented ways. The most significant of which is the role oil-rich states took during the global financial crises of 2008, bailing out the West financially and financing a global economy that was hit by a Great Recession. Resource rents enabled resource-abundant states to develop in ways in which they could take a position during an economic time that was challenging on the global level. MENA countries in particular positioned themselves to benefit from the transformations associated with the downturn and played an important role in the process. Yet, for much of the last century, the resource curse theory has been used to explain the volatile and unproductive economic performance of resource-abundant states. The belief that an abundance of a resource delivers anything other than benefits is counterintuitive. The resource curse theory needs to extend beyond the curse on resources and assess alternative factors that resource-abundant states could in fact implement in order to avoid the curse on resources. Despite the continuous efforts of the theory to prove the curse on resources, the study by Sachs and Warner is arguably the reason behind the development of the resource curse theory, as their research drove the discourse in the direction of the curse based on data that was questioned and revisited by them in 2001 (828), where they note that empirically the resource curse is not ‘bulletproof’. The resource curse theory limits the potential of resource-rich states by placing them all under the influence of low economic development. Analysing the progression of the literature allowed for a coherent conceptualisation of the limitations of the theory, which situated the research question within significance for the subsequent development of research in the field of resource abundance. Notably by understanding the essence of the curse methods of counteracting the curse became clear. The curse is not on resources per se but on the rents from the resource and thus by directing resource rents into quality institutions the negative externalities associated with resource abundance can be mitigated. The analyses of SWFs in this dissertation shed light on methods of mitigating resource curse symptoms through sound governance of resource wealth.

The research has highlighted that the dominant explanations of the resource curse of the past couple of decades are limited and do not suffice to explain the heterogeneity across oil-rich states. The variation present across oil-rich economies is not covered by the standard explanations of the resource curse theory. Furthermore, theories of the rentier state that complement the resource curse theory are static, which is problematic as it considers resource-

abundant states as homogenous entities limiting their development and governance to parameters that they assume are rigid. The present research has analysed the shortcomings of the theory while also highlighting the Orientalist gaze that permeates the analyses of resource-abundant states. Expanding the scope of the discipline conceptually by introducing SWFs to the discourse as a corrective tool for sound wealth management. Positioning SWFs within a theoretical framework that goes beyond treating them as investment vehicles. SWFs provide a rationale for resource rent allocation that responds to the issue of sound governance in the resource curse theory. Merging the resource curse theory with the discourse on SWFs has not been attempted before. Contributing to the creation of a comprehensive and holistic framework for analysing institutions in oil-rich states.

Similar to how Auty coined the term 'resource curse' and later recognized that the resource curse can be avoided through prudent policy measures. A critique and an assessment of the relevance of the theory to resource-abundant states provide an important contribution to the resource curse theory through the lens of institutional quality. Furthermore, it demonstrates the ability of institutional dynamics to provide contrary to the resource curse hypothesis. This research has questioned the validity of the resource curse theory and scrutinized its relevance in the context of sound governance. An important observation made from the discourse is that the burden of resource abundance is not on the abundance of resources but on the governance of wealth from the resources. Therefore, when understanding that the problem is with rents, directing resource wealth into an SWF problematizes the resource curse theory assumptions making it difficult to lend support to the hypothesis.

The resource curse narrative problematises resource abundance, where it compares resource-abundant states to non-resource-abundant states, which it considers to be better off economically. Such conclusions are drawn from data from the early 1970s to the late 1980s – where oil-rich states faced two global oil price shocks, and thus the registered negative growth rates are a result of the aftermath of the shocks, rather than an inherent tendency for oil-rich states to demonstrate poor economic growth. Problems of endogeneity were not considered. This formulation does not differentiate between a period of economic growth and a period of economic sensitivity and thus establishes a conceptual framework that focuses on resources being a curse. The reductionist approach of the resource curse hypothesis and its inability to differentiate between the experiences and trajectories of resource-rich countries and to envision a dynamic prospect for oil-producing economies is problematic. To expect oil-rich states to

diversify away from their resource sector which constitutes their core comparative advantage is unrealistic and suboptimal. For the strategic sector to have less of a role in the transition is impractical and therefore directing the wealth from their comparative advantage to SWFs and educational development distributes oil wealth into institutions that offset the negative externalities associated with resource abundance. The research highlights the role of SWFs as a valuable corrective response to the challenges associated with resource rent management. It underpins the weaknesses of the existing frameworks for analysing resource-rich economies and offers a dynamic conceptualisation of the institutional operations of resource-rich states.

The leading theme of the thesis sheds light on the potential efficacy of quality institutions in oil-rich states. Although the trade-offs involved may vary, the abundance of a resource is not necessarily zero-sum when it comes to economic growth and could improve the welfare of their respective economies. Oil as a commodity has seen its share of increased production whether that be in capacity or an increase in upstream investments. The importance of oil-rich states globally is substantial and their contributions to the global economy are undeniable. Just as the energy transitions have taken place and so must the discourse on resource-rich states. The volatility associated with oil can be dampened by SWFs which function as large fiscal buffers providing access to capital markets. This prompts innovative methods of financing in lucrative markets. The most obvious strategy for oil-rich states in the face of disruptive oil prices is to diversify their economies away from the oil-exporting sector. However, in reality, it is a much more complex process that requires time, in order to achieve fiscal diversification and reduce the reliance on oil revenues to finance government spending and current account deficits. This was demonstrative of the developments in the two case-studies discussed.

The case study of Qatar has developed and contributed to the discourse on oil-rich states and conceptually addressed the problematic nature of the resource curse theory in relation to resource-abundance. The research has expanded the limited literature on SWFs by providing a dynamic approach to analysing institutions and investment strategies, which contributes to an improved understanding of investment techniques and policies in an oil-rich Middle Eastern state that would otherwise be under scrutiny for its economic and investment strategies. Qatar has recently attracted the curiosity of many. Only a few decades ago it was a modest peninsula in the Middle East most notable for its pearl trade; has managed to become a cosmopolitan capital with one of the highest per capita incomes. The hydrocarbon industry has been the core of Qatar's wealth, extending its production by becoming an early pioneer in gas production

when other producers treated gas as a useless by-product of oil production, which is indicative of the importance of the hydrocarbon industry to the state. Qatar has been a trendsetter in the oil and gas industry and thus according to the resource curse narrative, Qatar would be a victim of the curse. On the contrary, Qatar has demonstrated resilience and raised significant questions in relation to rentier state structures. In fact, Qatar continues to fully take advantage of its gas leverage, building an international oil export portfolio, while increasing its strategic importance as an exporter in the region. Geopolitically this is significant as Qatar is a small country in size bordering large neighbouring oil-rich countries all bidding against the same commodity. Small economies can be coerced internationally and are exposed to efficiency demands. Therefore, failures in institutional establishments are magnified and difficult to conceal.

The resource curse narrative believes in the effective governance of non-resource-rich states. For this, the example of the Singaporean SWF was explored to shed light on whether the resource base of the fund influenced the governance of the fund. The resource curse hypothesis considers non-resource-rich states to have sound governance structures and perform better than resource-rich states. The Singaporean example demonstrated that just as oil-rich states could use their SWFs to stabilise macroeconomic challenges regarding oil price fluctuations, trade-dependent economies could use their SWFs to mitigate the effects of global inflation. This made for a particularly useful investigation whereby the institutional dynamics of two distinctly different SWFs provided another substantive depth to the research on resource-abundant states and governance in relation to non-resource-abundant states and whether the source of the fund dictates particular structures or outcomes. At first glance, the traditional resource curse argument would lead one to predict that the SWF of Qatar would differ tremendously compared to the Singaporean SWF. Largely due to the lack of sound governance that the resource curse assumes. However, they both have similar structural profiles and both funds were confronted with their share of external challenges. Furthermore, GIC and QIA have both repositioned their fund allocations since inception.

This thesis highlighted the developments within QIA and the importance of directing resource wealth in a fund that can be tapped into in times of fiscal instability. The study did not simply highlight growth figures of the SWF which are undisclosed and, if disclosed may be questionable but traced back asset allocations and the process behind acquiring certain assets by looking at news outlets of when certain assets were acquired and sold, which provided a much more significant indication of investment mechanisms and portfolio allocation. The

challenges that Qatar has faced in the last decade have made the research all the more significant and advanced the understanding of the limitations of the resource curse theory in relation to an oil-rich state, which thus far has relied on a rather crude hypothesis on the effects of resource abundance and economic growth. The resilience that Qatar demonstrated during the blockade exhibited a coordinated domestic economy, which allowed for the unanticipated blockade to pass with minimal effects on the domestic economy. It further entailed a retained and competitive hydrocarbon sector as, despite the land, air and sea blockade imposed by the United Arab Emirates in 2017, Qatar continued to supply natural gas through the Dolphin pipeline. The blockade allowed Qatar to foreshow its resilience as an oil-rich state and arguably prompted institutional developments that may have taken years to ascertain if it were not for the blockade. A blessing in disguise is indeed the reality of the developments that occurred as a result of the blockade. The QIA was put to the challenge by having to deposit dollars in local banks as pre-emptive. It was a wake-up call to increase its resilience against potential disruptions of not only oil volatility but political tensions that could render other sectors of the economy. While taking advantage of creating new outlets of economic growth domestically. The blockade accelerated the sophistication of the QIA in building a more diversified and resilient portfolio. The QIA has repositioned its portfolio of assets since the blockade and added two components to its mandate: to support Qatar's economy by investing in local companies and to provide liquidity to the local economy when needed. The development in the fund's mandate signifies the development of the fund to cater to the needs of its home country and demonstrates a more streamlined approach that is responsive to fiscal needs rather than an estranged institution to the welfare of the state.

Through systematic observation of investment allocation, this thesis has realised the resilience and improvement in the investment mechanisms of QIA. It has looked at specific investment allocations that were more prominent in the past and no longer serve the objectives of the fund. The QIA has diversified away from the hydrocarbon sector, investing beyond the energy sector serves the fund in times of volatility. In the past real estate ownership constituted an important allocation in the portfolio mix of QIA. However, a shift from the standard investments in real estate to new sectors that may have not been as popular in the past is observed. Diversifying investments requires tapping into new sectors to create new sources of revenue in the case of volatility. QIA's exposure to the technology market, venture capital, renewable energy and the sports sector is proof of a well-diversified asset portfolio that has through time repositioned its allocations and understood its needs as well as opportunities in the market. Through process-

tracing, the research identified the process of investment allocations and how acquiring certain investments facilitated acquiring harder-to-obtain allocations. This finding provided a deeper understanding of the shift in the portfolio sector, along with demonstrating that the process takes time. QIA acquired the energy services and equipment company Cegelec in 2008 and sold it a year later to Vinci a concessions and construction company, who was in fact bidding to acquire Cegelec along with QIA – is indicative of a meticulously planned investment procedure. Investing in Western hi-technology industries is not a common investment allocation among SWFs. Such investments occurred in the early years of the fund's establishment, which demonstrates that investments were in fact planned for a long-term vision that may have been overlooked as insignificant or experimental when initially acquired. However, QIA understood the importance of Cegelec to the industry and its potential. Acquiring Cegelec from QIA obligated Vinci to offer QIA capital making it one of the largest shareholders of the company, had QIA not won the bid to acquire Cegelec it would not have been able to acquire a share of Vinci. Tapping into new sectors, creating new sources of diversified revenue streams, and taking advantage of opportunities in the global economy. This method of process-tracing has allowed for the systemic examination of fund acquisition and the documentation of an investment technique that would not have been disclosed or publicised. Allowing for meaningful realisations to be made.

Just as the 1970s was challenging to oil-rich states with unprecedented commodity prices, non-resource-abundant states suffered from inflation. Singapore is a trade-dependent economy and is highly sensitive to global market imbalances and inflation levels. Singapore had already established an SWF – Temasek in 1974, which had a focus on investing domestically. However, in response to the global challenges of the 1970s Singapore's government established GIC in 1981 in order to manage national savings abroad and mitigate the effects of global inflation on its domestic economy. The GIC embarked on a comprehensive investment framework that focused on short-term, low-risk investments. It took GIC until 2013 to propose a new investment framework that focused on long-term returns and higher-risk investments. To complement the higher risk orientation a 65:35 reference portfolio was introduced into the new framework. An active portfolio was developed post-global financial crisis, where the investment framework allowed a level of flexibility given the investments undertaken added value to the fund. The new framework is reflective of the development of GIC as an SWF and the lessons and experiences that have shaped the institutional architecture of the fund. Arguably one of the most important factors in the development of the investment framework is the move

from being a conservative fund in terms of risk exposure to a long-term oriented investment strategy. The post-2013 investment framework is revolutionary to the development of the fund and serves the domestic fiscal needs of the state. When oil-rich states SWFs were bailing out weakened financial institutions during the 2008 global financial crisis, non-commodity-based SWFs were struggling. GIC incurred significant losses during the global financial crisis. The challenges of global inflation that non-resource states are susceptible to are equivalent to oil price volatility, which the resource curse theory attributes to issues of governance.

Both GIC and QIA have demonstrated changes in their investment frameworks that are more streamlined and reflective of a learning process. In the case of QIA, it builds resilience in a rent-based state and in the case of GIC, it functions as a buffer and shock absorber during global financial imbalances. Development is not linear and highly uneven, capturing opportunities for change over time is expected of an SWF. Just as the developments in investments occur in SWFs effectively so must the dominant narrative that resource-abundant states are stationary and only absorb resource curse externalities. The focus should shift to how resource-rich states can increase their resilience in the face of oil price volatility disruptions and whether they can adopt certain strategies such as utilising institutions to make themselves more resilient.

An element that was once the focus of the discourse on SWFs is transparency. The issue of transparency precipitated after the global financial crisis where critics perceived SWFs as a threat to the free market with their vast investments globally. The discourse was occupied with encouraging SWFs to demonstrate greater transparency. The development of the Truman Index in 2008 was a prototype measurement aimed at promoting transparency and accountability in SWFs; however, it has stopped reporting since 2016 as the remains of the dust of the financial crises settled. The Index was not providing more than scores that fell short of providing substantial substance. Transparency in the case of SWFs is a double-edged sword and not always beneficial. In fact, transparency could be detrimental to the functioning of the fund, particularly when acquiring assets and bidding. Singapore's GIC publishes limited information, compared to Temasek which is praised for being transparent and publishing annual reports. Temasek invests domestically where annual reports function as state track records. However, GIC only invests abroad and thus revealing financial information would be against Singapore's national interest making it easier to attack the Singaporean dollar during periods of volatility. Disclosing information can affect the strategic allocation of assets in a

fund exposing them to undue criticism and thereby influencing investment decisions. The need to report frequently may incentivise short-term investments that limit potential wealth. Therefore, the focus on transparency should shift to the fund's developments and understanding the investment allocations of the fund and changes that occur at critical junctures.

The final chapter aimed to broaden the lens of the analysis beyond SWFs and to address the way in which the resource curse theory considers other areas of public policy. The resource curse theory, with its broad propositions on how natural resource wealth undermines all aspects of public policy, also argues that sectors such as education are also negatively affected in resource-abundant states where the focus would be on quantity of education service provision rather than quality. This is then often blamed for the weak linkages between the education sector and the labour market, and the high levels of youth unemployment in these countries. The latter perspective not only applies the resource curse's static approach and universalist assumptions to the education sector, but also overlooks the importance of the economy's productive capacity in generating productive economic activity and their associated labour market outcomes – something that itself is determined by broader political economy factors at the national, regional, and international levels.

Human capital development in recent years has attracted significant policy and investment attention in the context of Qatar both nationally and internationally. Incorporating an analysis of educational institutions further highlights the capabilities of quality institutions in avoiding the resource curse trap. The resource curse theory argues that oil-rich states lack a highly skilled and educated population, suggesting that resources affect relative investments in human capital. The logic behind this comes from the belief that countries with resources treat their resource capital as their sole engine for growth and develop a form of false security and thus become neglectful of human capital accumulation. However, it was documented that oil-rich Middle Eastern states allocated a large share of their oil revenues to human capital development. This is in stark contrast to the notion of education in the resource curse theory which stipulates the inability of resource-abundant states to benefit from their resource wealth in an effective manner, in relation to public welfare needs and education. Once again, the shortcomings of the resource curse are the oversimplification and homogenization of resource-abundant states which shows the lack of development of the theory in providing explanations for the drastic changes in the political economies of resource-abundant states. Complementary

to the resource curse theory is the rentier state theory which adds another dimension to the analysis of education. The rentier state theory believes that investing in sectors such as education is a means of buying off patronage. However, such an argument is only valid when educational strategies are aimed at providing large-scale access to education rather than quality education.

Qatar has made it a mission to develop its educational institutions extensively in recent years and create human capital, contrary to the assumptions of the resource curse narrative. Although establishing a change in the educational system from primary, secondary, and tertiary levels of education has its share of challenges and needs for reassessment. Building human capital and improving educational systems also involves extensive reforms to improve the business environment of the labour market to complement human capital accumulation. This requires a deconstruction from the standard top-down approaches that simply build institutions to accumulate human capital, to a bottom-up approach which opens up job markets to cater to the human capital developed. This also requires that an oil-rich state address the rentier model approach that builds physical capital and human capital without creating efficient factors of production to cater to the newly developed human capital. Although Qatar has invested in human capital the labour market has structural weaknesses masked by educational institutions, which demonstrate captive weaknesses in relation to domestic labour demands. The development of organisational structures to support and guide prospective job seekers and the collaboration of educational institutions and the private sector is crucial. Improving domestic human capital only creates value if such individuals are actively participating in the field in which they have specialised. Therefore, human capital development is not an end but a means to develop institutional structures and promote organisation development, which prevents the stagnation of institutions but promotes constant progress to keep up and maintain the source, which is human capital accumulation. In strong contrast to the resource curse narrative, which attaches an archaic, definitive, unchangeable state of affairs to the resource-abundant state. Resource riches do not dictate the path to human capital development when wealth is managed and distributed with a long-term vision in sight.

Through the study of SWF strategies and the educational sector, the thesis highlighted the shortcomings of the resource curse theory. In doing so, it proposes that oil rents do not predetermine policy choices or outcomes, and that resources do not necessarily dictate the same patterns of decision-making and policymaking across different countries. A wide range of

variables shape the way in which resources are managed and the role they play in a country's socio-economic development. The research adds to the ongoing discourse on the development trajectories of resource-abundant states while evaluating the limitations of the resource curse assumptions. The main focal points of the thesis are located at the institutional level, with SWFs forming the main lens of analysis along with educational institutions. Whereas the resource curse theory treats institutions and their vulnerabilities to the 'curse' of natural resources in deterministic and absolutist terms, by challenging the latter's assumptions and theoretical foundations this thesis argues that it's crucial to acknowledge the varied, dynamic, and evolving nature of institutions in resource-abundant states, and the significant role that they play in shaping the oil-rich countries varied development trajectories.

Appendix

Table 3.4: Sovereign Wealth Funds

<i>State</i>	<i>SWFs</i>	<i>Inception</i>	<i>Size/US\$</i>	<i>Source of funding</i>
<i>United States</i>	Texas Permanent School Fund	1854	46,520,638,721	Oil and public land
<i>United States</i>	Permanent University Fund	1876	47,700,000,000	Public lands
<i>New Mexico</i>	Land Grant Permanent fund	1876	784,200,000	Minerals and public land
<i>United States</i>	Utah SITFO	1896	2,552,790,807	Land and Mineral
<i>Kuwait</i>	Kuwait Investment Authority	1953	533,650,000,000	Oil
<i>Kiribati</i>	Kiribati Revenue Equalization Reserve Fund	1956	608,521,000	Phosphates
<i>United States</i>	Idaho Endowment Fund Investment Board	1969	1,884,125,093	Land and Mineral
<i>Saudi Arabia</i>	Public Investment Fund	1971	390,000,000,000	Oil
<i>United States</i>	Severance Tax Permanent Fund	1973	3,787,000,000	Oil and minerals
<i>United States</i>	Permanent Wyoming Mineral Trust Fund	1974	7,947,684,703	Minerals
<i>United Arab Emirates</i>	Abu Dhabi Investment Authority	1976	579,621,120,000	Oil
<i>United States</i>	Alaska Permanent Fund Corporation	1976	67,349,300,000	Oil
<i>Canada</i>	Alberta Heritage Savings Trust Fund	1976	17,200,000,000	Oil
<i>United States</i>	Montana Permanent Coal Trust Fund	1978	17,600,000,000	Minerals
<i>Oman</i>	Oman State General Reserve Fund	1980	14,300,000,000	Oil
<i>Brunei</i>	Brunei Investment Agency	1983	60,000,000,000	Oil
<i>United Arab Emirates</i>	International Petroleum Investment Co.	1984	12,794,615,000	Oil
<i>United States</i>	Alabama Trust Fund	1985	3,166,877,626	Oil and gas
<i>United States</i>	Louisiana Education Quality Trust Fund	1986	1,416,850,000	Oil
<i>Malaysia</i>	National Trust Fund	1988	2,164,242,600	Oil
<i>Norway</i>	Government Pension Fund-Global	1990	1,122,110,000,000	Oil
<i>Botswana</i>	Pula Fund	1994	4,927,920,000	Diamonds

United States	University of Texas Investment Management Company	1996	48,400,000,000	Public lands
Gabon	Sovereign Fund of the Gabonese Republic	1998	142,905,000	Oil
Venezuela	Macroeconomic Stabilization Fund	1998	Non-disclosed	Oil
Azerbaijan	State Oil Fund of Azerbaijan	1999	42,463,700,000	Oil
Algeria	Revenue Regulation Fund	2000	54,800,000,000	Oil
Kazakhstan	Kazakhstan National Fund	2000	61,115,000,000	Oil
Mexico	Oil Revenues Stabilization Fund of Mexico	2000	15,400,000,000	Oil
Mexico	Estabilización de los Ingresos Presupuestarios (Mexico Budgetary Income Stabilization Fund)	2000	8,405,430,000	Oil
United Arab Emirates	Mubadala Investment Company	2002	232,200,000,000	Oil
Equatorial Guinea	Equatorial Guinea Fund for Future Generations	2002	165,556,000	Oil
Iraq	Development Fund for Iraq	2003	900,000,000	Oil
Russia	National Welfare Fund	2004	165,380,000,000	Oil
Sao Tome and Principe	National Oil Account	2004	13,150,096,774	Oil
Venezuela	National Development Fund	2004	Non-disclosed	Oil
Qatar	Qatar Investment Authority	2005	335,000,000,000	Oil
United Arab Emirates	RAK Investment Authority	2005	1,200,000,000	Oil
Timor-Leste	Timor-Leste Petroleum Fund	2005	15,822,994,640	Oil and gas
Chile	Chile Pension Reserve Fund	2006	10,179,510,795.89	Copper
Bahrain	Mumtalakat Holding	2006	18,668,200,000	Oil
United Arab Emirates	Investment Corporation of Dubai	2006	305,233,000,000	Oil
Libya	Libyan Investment Authority	2006	60,000,000,000	Oil
Mauritania	National Fund for Hydrocarbon Reserves	2006	52,600,000	Oil

<i>Malaysia</i>	Terengganu State Sovereign Fund	2006	Non-disclosed	Oil and gas
<i>Oman</i>	Oman Investment Fund	2006	3,400,000,000	Oil
<i>Trinidad and Tobago</i>	Heritage and Stabilization Fund	2007	6,255,349,599	Oil
<i>Chile</i>	Economic and Social Stabilization Fund	2007	10,860,380,620.91	Copper
<i>United Arab Emirates</i>	Emirates Investment Authority	2008	44,515,182,460	Oil
<i>Papua New Guinea</i>	Papua New Guinea Sovereign Wealth Fund	2011	30,000,000,000	Oil and gas
<i>Iran</i>	National Development Fund of Iran	2011	91,000,000,000	Oil
<i>Mongolia</i>	Fiscal Stability Fund	2011	46,725,200	Oil and minerals
<i>Ghana</i>	Ghana Heritage Fund	2011	521,827,648.13	Oil
<i>Ghana</i>	Ghana Stabilization Fund	2011	455,534,395.14	Oil
<i>United States</i>	North Dakota Legacy Fund	2011	6,567,747,885	Oil
<i>Iran</i>	Iran Oil Stabilization Fund	2011	24,000,000	Oil
<i>Nigeria</i>	Nigeria Sovereign Investment Authority	2012	1,690,440,000	Oil
<i>Australia</i>	Western Australia Future Fund	2012	923,287,000	Minerals
<i>Angola</i>	Fundo Soberano de Angola (Angola Sovereign Wealth Fund)	2012	2,270,000,000	Oil
<i>Kazakhstan</i>	National Investment Corporation	2012	109,534,000	Oil
<i>Colombia</i>	Colombia Savings and Stabilization Fund	2012	3,225,580,000	Oil and Mining
<i>Uganda</i>	Petroleum Revenue Investment Reserved (Uganda Petroleum Fund)	2015	120,541,000	Oil
<i>Guyana</i>	Bank of Guyana Natural Resources Fund	2015	139,459,937	Oil
<i>Mexico</i>	Fondo Mexicano del Petroleo (Petroleum Fund of Mexico)	2015	1,109,950,000	Oil
<i>United States</i>	Colorado Public School Fund Investment Board (Colorado School Trust Endowment)	2016	1,263,264,948	Oil
<i>Mongolia</i>	Mongolia Future Heritage Fund	2017	268,925,000	Oil
<i>Canada</i>	Ontario First Nations Sovereign Wealth LP	2018	22,164,200	Oil

Non-Resource based Sovereign Wealth Funds

<i>State</i>	<i>SWFs</i>	<i>Inception</i>	<i>Size/\$</i>	<i>Source of funding</i>
<i>United States</i>	New Mexico State Investment Council	1958	23,247,473,242	Non-commodity
<i>Austria</i>	Österreichische Beteiligungs AG (OBAG)	1967	25,810,900,000	Non-commodity
<i>Singapore</i>	Temasek Holdings	1974	417,351,000,000	Fiscal appropriation
<i>Singapore</i>	Government Investment Corporation Private Limited	1981	453,200,000,000	Foreign exchange reserves
<i>Tuvalu</i>	Tuvalu Trust Fund	1987	130,043,000	Non-commodity
<i>Finland</i>	Solidium	1991	9,312,970,000	Non-commodity
<i>Malaysia</i>	Khazanah Nasional	1993	20,200,200,000	Various public revenues
<i>China</i>	Hong Kong Monetary Authority Investment Portfolio	1993	528,054,000,000	Non-commodity
<i>China</i>	SAFE Investment Company	1997	417,844,700,460	Non-commodity
<i>Peru</i>	Peru Fiscal Stabilization Fund	1999	5,471,730,000	Non-commodity
<i>China</i>	National Council for Social Security Fund	2000	324,996,000,000	Non-commodity
<i>Taiwan</i>	National Financial Stabilization Fund, Taiwan	2000	1,565,980,000	Non-commodity
<i>United States</i>	Native Hawaiian Trust Fund	2000	409,414,446	Non-commodity
<i>United States</i>	Oklahoma Tobacco Settlement Endowment Trust	2001	1,402,864,348	Non-commodity
<i>New Zealand</i>	New Zealand Superannuation Fund	2003	31,375,700,000	Fiscal appropriation
<i>Palestine</i>	Palestine Investment Fund	2003	856,224,000	Non-commodity
<i>South Korea</i>	Korea Investment Corporation	2005	157,300,000,000	Foreign exchange reserves
<i>Vietnam</i>	State Capital Investment Corporation	2005	315,000,000	Various public revenues
<i>Australia</i>	Future Fund	2006	110,643,000,000	Fiscal appropriation
<i>Uzbekistan</i>	Fund for Reconstruction and Development of Uzbekistan	2006	20,000,000,000	Non-commodity
<i>Belgium</i>	SFPI-FPIM (Federal Holding and Investment Company)	2006	2,696,950,000	Non-commodity
<i>China</i>	China Investment Corporation	2007	1,045,715,000,000	Foreign exchange reserves
<i>China</i>	China-Africa Development Fund	2007	5,000,000,000	Non-commodity

Canada	Alberta Investment Management Corporation	2008	86,289,300,000	Non-commodity
Kazakhstan	Samruk-Kazyna	2008	63,112,600,000	Non-commodity
United Arab Emirates	Sharjah Asset Management	2008	793,202,000	Non-commodity
Russia	Russian Direct Investment Fund	2011	13,000,000,000	Non-commodity
Italy	CDP Equity	2011	6,763,300,000	Non-commodity
Greece	Hellenic Corporation of Assets and Participations S.A.	2011	1,555,230,000	Non-commodity
Senegal	Senegal FONSI	2012	1,000,000,000	Non-commodity
Rwanda	Agaciro Development Fund	2012	205,888,000	Non-commodity
Bolivia	Fund for Productive Industrial Revolution	2012	413,800,000	Non-commodity
Bhutan	Bhutan Economic Stabilization Fund	2012	1,460,000	Non-commodity
Panama	Fondo de Ahorro de Panama	2012	1,528,507,000	Non-commodity
China	CNIC Corporation Limited (Guoxin International Investment Co., Ltd.)	2012	33,300,000,000	Non-commodity
Ireland	Ireland Strategic Investment Fund	2014	16,909,900,000	Non-commodity
Luxembourg	Fonds souverain intergénérationnel du Luxembourg (Luxembourg Intergenerational Sovereign Fund)	2014	268,696,000	Non-commodity
Malta	The National Development and Social Fund Malta	2015	638,972,000	Non-commodity
Turkey	Turkey Wealth Fund	2016	240,000,000,000	Non-commodity
China	Hong Kong Future Fund	2016	28,827,600,000	Non-commodity
Germany	Fonds zur Finanzierung der kerntechnischen Entsorgung (Kenfo)	2017	26,009,200,000	Non-commodity
Egypt	The Sovereign Fund of Egypt (Egypt Fund)	2018	11,959,200,000	Non-commodity
Australia	NSW Generations Fund Investment Trust	2018	7,644,820,000	Non-commodity

Source: SWFI (2020)

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