The Political Determinants of Sovereign Wealth Funds

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The Political Determinants of Sovereign Wealth Funds

by

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A thesis submitted to the
Faculty of the Graduate School of the
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of the requirement for the degree of
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This thesis entitled:

The Political Determinants of Sovereign Wealth Funds

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The final copy of this thesis has been examined by the signatories, and we find that both the content and the form meet acceptable presentation standards of scholarly work in the above mentioned discipline.
Abstract

Eldredge, Cody Daniel (Ph.D., Political Science, Department of Political Science)
The Political Determinants of Sovereign Wealth Funds
Dissertation directed by Professor David H. Bearce

Over the past half-century, roughly one-quarter of states in the international system have created Sovereign Wealth Funds (SWFs). As a case of sovereign states investing public money mostly in private markets across borders, it is not altogether clear why SWFs have proliferated to this extent. What explains their spread in recent decades? In this dissertation, I argue that states create SWFs as a type of insurance against external risks that arise from participating in global markets. I reason that relatively vulnerable, medium powers presided over by secure leaders are the states most likely to create this type of institution. This is because SWFs are well suited to address an array of risks faced by this category of state. To evaluate my argument, I rely on novel datasets consisting of all states in the international system from 1950 to 2012, and all leaders in the international system from 1950 to 2004. I complement this analysis with four case studies to illustrate in greater depth the relationship between relative power, vulnerability, and the likelihood of states creating SWFs.
Dedication

To Maxine
Acknowledgements

I owe a debt of gratitude to a number of individuals for their support as I have prepared this dissertation.

In particular, I wish to express gratitude to David Bearce, who has been a tireless mentor, critic, and friend through my time in graduate school. This project was possible due to David’s diligent supervision. I similarly wish to acknowledge Moonhawk Kim, who has also acted as a tireless mentor and friend, and who provided countless rounds of careful feedback as this project developed. I owe much of my graduate career to Professors Bearce and Kim, and for that I am profoundly grateful.

I also wish to express gratitude to Andy Baker, David Leblang, and Robert McNown, who kindly served on my dissertation committee, and who similarly offered thoughtful and constructive feedback on this project as it developed.

I owe a debt of gratitude to a number of other academics who have helped nurture my interest in Sovereign Wealth Funds (SWFs). In particular, I wish to thank Anita Halvorssen, with whom I have shared numerous discussions about SWFs over as many cups of coffee. I owe much of my interest in SWFs to Anita. I similarly wish to thank Sarah Sokhey, who has made herself consistently available to discuss this project throughout its execution.

I am fortunate to have matriculated with a wonderful cohort of talented scholars, and I am grateful to them for their friendship and commiseration throughout our time at CU. In particular, I wish to thank Kim-Lee Tuxhorn. On countless occasions Kim-Lee has offered a thoughtful ear, and he has never hesitated in providing careful feedback on this project, as well as numerous others. Kim-Lee has also been a tireless friend and confidante during our time at CU, and for that I am truly grateful. I also wish to thank Thomas Cook and Stefan Wojcik, who have similarly offered friendship, and welcome ears to discuss different aspects of this project.

The Department of Political Science is fortunate to have Rachael Lovendahl as its graduate program administrator, and I owe many thanks to Rachael for her support and friendship in navigating the travails of graduate school. Few would be capable of navigating CU’s formidable bureaucracy without Rachael’s assistance.

Last, I wish to acknowledge my family, including Dean, Ryoka, and Atticus. It was with their love, support, and patience above all that this project was possible.
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Chapter 1 – Introduction

Over the past half century, roughly one-quarter of the states in the international system have created sovereign wealth funds (SWFs). As a case of governments investing public money mostly in private markets across borders, it is not altogether clear why SWFs have proliferated to this extent. After all, commercial investing is not the ordinary course of business for most states. The curious spread of SWFs in recent decades has not gone unnoticed by policymakers, who have long expressed concerns over the growing presence of sovereign investors in private markets. Given that the world’s SWFs likely wield over USD $10 trillion in assets, these concerns are perhaps not unfounded (IMF 2008).

Despite their growing presence globally, SWFs have received relatively little attention within the field of international relations. Where analysts have considered the topic, they tend to focus on the possible economic and security risks posed by SWFs. Few have sought to explain their notable spread in the international system. This reality leaves a number of questions unanswered, chief among them why so many states have created SWFs. Their proliferation is doubly curious when one considers both the costs and risks involved with creating and operating this type of institution; in so doing, policymakers divert vast sums of public money from other possible uses to invest in markets beyond their political reach. This undoubtedly entails a nontrivial level of risk. Why, then, have so many states created SWFs?

It is notable that the emergence of SWFs in the international system has accompanied the resurgence of international economic liberalization in the 20th and 21st centuries. I propose that this is no mere coincidence. While SWFs are vehicles designed to facilitate the movement of investment capital across borders, a process that in the absence of capital mobility – a defining feature of the contemporary global economy – would be all but impossible, I propose that there exists a deeper
causal relationship between these trends. Indeed, I argue that the decision to create a SWF emerges directly from considerations forced upon states as they become members of the global economy.

In short, I argue that states create SWFs as a type of insurance against risks that arise from participating in global markets. Membership in the world economy heralds tremendous benefits, but it simultaneously portends significant risks for states, their economies, and their publics. SWFs are an institution well suited to help states insulate and insure against such risks, and I propose that this largely explains trends in the spread of SWFs over the past half century. The task of this dissertation is to elaborate on this argument before proposing a series of empirical tests to evaluate its validity.

**Structure of the Dissertation**

This dissertation proceeds in four additional chapters and a conclusion. The *second chapter* motivates the research question underlying this project: why do some states have SWFs, while others do not? Here I justify this question as one that is both substantively interesting and as one that remains essentially unanswered. In establishing my question as one that warrants scholarly attention, I first advance and defend a working definition of SWFs. Indeed, to date there appears to exist no scholarly consensus on what constitutes a SWF. I then provide an overview of trends in the spread of SWFs internationally, and subsequently discuss general characteristics of and relevant axes of variation across the world’s SWFs. Next, I survey a number of plausible, though largely anecdotal, explanations for why states create SWFs. I demonstrate why these explanations are largely incomplete, incorrect, or otherwise unsatisfying before concluding the chapter.

In *Chapter Three*, I advance my argument for why states create SWFs. To the extent that states create these institutions as a type of insurance against external risk, I reason that relatively vulnerable, medium powers are the states most likely to create SWFs. Medium powers face incentives to create SWFs because they are vulnerable participants in global markets, while
simultaneously possessing the material capability to create SWFs of a size sufficient to provide benefits in the face of risk. While small powers may encounter incentives to create a SWF given their vulnerable status in the global economy the costs of establishing a SWF are largely prohibitive for this group of states by virtue of their size. Large powers, on the other hand, readily possess the material capability requisite to creating a SWF, but mostly lack the incentives to do so. This is because large powers, by virtue of their size and wealth, have little need to avail themselves of the insulating function of a SWF. I therefore expect that small and large powers, respectively, are the states least likely to create SWFs. This leads me to hypothesize that medium powers are the states most likely to create SWFs.

Given the costs involved with creating a SWF, I similarly reason that secure leaders within medium powers are more likely to create SWFs than insecure ones. While all medium powers might face incentives to create a SWF while possessing the capability to do so, politically insecure leaders are likely to be more cost-averse, and may therefore prefer alternative policy options. I thus position SWFs as an institution best suited for relatively vulnerable, medium powers presided over by secure leaders. This leads me to propose a series of testable hypotheses before concluding the chapter.

*Chapter Four* motivates a series of empirical tests to evaluate my hypotheses. I present two sets of statistical tests with country-year and leader-year as the units of analysis, respectively. For all sets of tests, my dependent variable is whether a state or leader creates a SWF. I test each hypothesis using time-series cross-sectional datasets. For my country-year hypotheses, my dataset includes all states in the international system from the period 1950 to 2012. To date, this represents the most comprehensive dataset of the world’s SWFs. For my leader-year hypothesis, my dataset includes all state leaders in the international system from 1950 to 2004. After discussing the ways in which I operationalize my key independent and control variables, I present and discuss the results of my statistical tests. I find robust support for my argument that relatively vulnerable, medium powers are
the states most likely to create SWFs. I similarly find support for my argument that more secure leaders are more likely to create SWFs.

Chapter Five consists of four illustrative case studies to complement the empirical results presented in the previous chapter. Specifically, I consider the cases of the Maldives, Zimbabwe, Singapore, and Japan. In all cases, leaders have publicly discussed an interest in creating a SWF, though only Singapore proceeded to establish an operational SWF. For Maldives and Zimbabwe, both small and vulnerable members of the global economy, the costs of establishing a SWF were prohibitively high. Thus, despite a desire to create such an institution, neither state was able to establish an operational fund. Conversely, as a large power, Japan could create a sizeable SWF with relative ease. Despite this, Japanese leaders and bureaucrats have consistently dismissed the idea of such a fund as being necessary for the country, despite any probable benefits. This corroborates my expectation that as a large power, Japan largely lacks the need for the insulating effects of a SWF. Singapore represents the only positive case in my sample, and its experience leading up to the creation of its first SWF largely accords with my theoretical argument. Singapore is a solidly medium power, and it is deeply integrated into world markets. As a result, it is highly vulnerable, and therefore stands to benefit considerably from a SWF. By virtue of its relative economic power, Singapore also has the ability to create a SWF. Unsurprisingly, the country created its first SWF in 1974, and it remains operational today.

In my Conclusion, I summarize the contribution of this dissertation to our understanding of SWFs and why states create them. I discuss the implications of my findings for the future study of SWFs within international political economy, specifically, and within international relations more broadly. I also discuss the implications of my findings for policy makers; not only do my findings contribute to our understanding of why states create SWFs, they serve to provide a more complete picture to policymakers who may be concerned with the possible security and economic risks of
SWFs operating in their countries. I conclude this chapter with a discussion of future avenues for research within a research program whose referent is SWFs.
Chapter 2: Why study Sovereign Wealth Funds?

In Chapter 1, I presented the question motivating this dissertation: why do some states have Sovereign Wealth Funds (SWFs), while others do not? The task of this chapter is to justify this question as one that remains unanswered, and as one that deserves scholarly attention. Despite gaining some scholarly recognition in recent years, SWFs have nevertheless remained an understudied phenomenon. This is particularly the case in political science, which has lagged behind other disciplines, such as economics and business, in exploring both the causes and effects of SWFs.

This chapter is broken into three sections and a conclusion. In the first section, I advance and defend a working definition of SWFs. In the second section, I provide an overview of their development and spread in the international system since the 1950s. These two sections serve to highlight SWFs as fundamentally interesting institutions that warrant scholarly attention within political science. The third section explores a handful of existing possible answers – many of which are anecdotal or largely incomplete – for why states create SWFs. I also examine a recent contribution in political science that seeks to explain the political foundations of SWFs. While this contribution represents a solid start to understanding the recent proliferation of SWFs in the international system, it nevertheless fails to advance a comprehensive explanation for why states create these institutions. This section therefore serves to demonstrate that the question motivating this dissertation remains essentially unanswered.

Defining SWFs

There has yet to emerge a consensus definition of what precisely constitutes a SWF, and different analyses have tended to rely on inconsistent understandings as a result. Some analysts have even addressed the topic while neglecting entirely to define the institution. The lack of a consistent working definition is perhaps testament to the fact that SWFs remain a relatively understudied
The goal of this section is therefore to advance and defend a coherent working definition of SWFs that will serve, in turn, as the foundation for subsequent analysis.

Scholars have proposed a handful of working definitions of SWFs, and generally agree that they are state-run investment vehicles that invest and manage pools of government assets, some of which are international (Chwieroth 2014; Das, Mazarei, and van der Hoorn 2010; Helleiner 2009; IWG 2008; Klitzing et al. 2010; Truman 2008). Points of divergence typically arise in one of three areas. First, analysts have disagreed over what types of governments qualify as ‘sovereign.’ Second, analysts diverge in their understanding of what qualifies as ‘government capital’ for the purposes of investing. Some restrict their definition to institutions that invest only state-owned capital, for example, while others include institutions that manage capital owned by other stakeholders, including individuals and firms. Third, analysts diverge in their view of where SWF investment activity must occur. Here, some include funds that invest their capital mostly or entirely domestically, while others emphasize an international component to the investment activity of SWFs. For the purpose of this analysis, I conceive of SWFs as a case of national state actors using state-owned funds to invest mostly or entirely in markets across borders.

To elaborate on my working definition, I discuss these points of contention in greater detail below. I begin, perhaps counterintuitively, by discussing what SWFs are not. Analysts have variously identified different institutions or pools of capital as SWFs, even though they are technically something altogether different. These mislabeled candidates include: pension funds, foreign exchange reserves, and even state-owned enterprises. Discussing what SWFs are not is useful for understanding what attributes precisely characterize and distinguish SWFs from other related institutions. I follow this by identifying and discussing a number of dimensions along which existing SWFs vary. This further contributes to understanding the institution for subsequent analysis.
National Governments, Public Money, and Cross-border Investing

In defending my working definition, it is important to emphasize three key defining characteristics of SWFs: they are managed by national, or sovereign, governments, they invest public capital, and they invest that capital mostly or entirely across borders. This conception notably excludes a number of institutions that other analysts may consider to be SWFs. For example, the Alaska Permanent Fund Corporation (APFC) and other similar funds are occasionally characterized as SWFs.\(^1\) I exclude the APFC from my analysis because it is controlled by the US state of Alaska, a subnational government principal that is not a ‘sovereign’ according to conventional use within international relations.\(^2\) The United States government has no role in managing the APFC, and the state of Alaska lacks sovereign equivalence to countries in the international system; as a result it would be inappropriate to categorize the APFC along side other funds that are managed by national government principals.

Beyond this disparity, the bulk of the APFC’s assets are invested domestically within the United States (APFC 2015). This fails to satisfy the criterion that SWF assets need to be mostly or wholly invested outside the SWF’s host country. As I discuss in more depth later, maintaining most or all investments outside the country of origin is a purposive design feature of SWFs, thus making it an essential component to a working definition here.\(^3\) Because a subnational government principal manages the AFPC, and because it lacks an international investment component, I do not consider it

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\(^1\) The Sovereign Wealth Fund Institute, for example, ranks the APFC as a SWF, along with other US-based investment funds controlled by Alabama, New Mexico, Texas, and other states (see SWF Institute 2015).

\(^2\) This choice is consistent with other analyses that similarly exclude these types of funds. An IMF-sponsored edited volume on SWFs, for example, emphasizes that SWFs are managed by the state and not subnational entities (Das, Mazarei, and van der Hoorn 2010). Chwieroth (2014) similarly excludes the APFC and other similar candidates because they are not managed by national governments.

\(^3\) It is worth highlighting some inconsistencies among analysts on this point. For example, the IMF-sponsored International Working Group (IWG) of Sovereign Wealth Funds emphasizes that a defining characteristic of SWFs is that they ‘invest in foreign financial assets’ and typically engage in ‘cross-border investing,’ but the IWG allows institutional representation from funds that are largely or wholly invested within their own host country (IWG 2008, 3). This practice appears to be inconsistent with the IWG’s working definition of what constitutes a SWF.
to be a SWF. Rather, it is akin to domestic low-risk public pension fund managed by a government, albeit not national, entity.

National government-sponsored pension funds, such as the US Social Security Administration (SSA) trust finds, or Japan’s Government Pension Investment Fund, are also occasionally treated as SWFs (i.e., Blundell-Wignall, Hu, and Yermo 2008; Truman 2008). My working definition similarly excludes these types of institutions. In the case of the former, the SSA trust funds are invested wholly in US government securities (SSA 2015). There is no cross-border investment component to suggest that these funds would together characterize a SWF. Further, the SSA trust funds are comprised of individual and employer contributions that are merely managed by the US government. The investment capital in the SSA trust funds could therefore not be fairly characterized as ‘state-owned.’ Japan’s GPIF is similarly comprised of individual and employer contributions, and while it invests assets in private markets in addition to government securities, the vast majority of investing occurs domestically. The GPIF therefore also fails to satisfy criteria that would make it a SWF (GPIF 2015).

It is also worthwhile to distinguish SWFs from foreign exchange reserves (forex) held by central banks. While forex are indeed state-owned assets, they are not wielded as investment capital in private markets; they are reserve assets by design, after all. Further, forex are typically designated to support governments’ exchange rate policies, to address balance of payments disequilibrium, or to otherwise support the implementation of monetary policy (Gilpin 2001, 246). Given their comparatively narrow purview, forex are quite different from SWFs. This distinction can grow even blurrier because states have occasionally used forex to capitalize their SWFs. This has led some analysts to lump forex together with SWFs, and even to include the former when calculating the value of countries’ SWFs (i.e., Truman 2008). The distinction between forex and SWFs is important
to emphasize, because in the next chapter I situate SWFs as a lucrative complement, if not complete alternative, to forex.

State-owned enterprises (SOEs) are also occasionally conflated with SWFs. This is perhaps unsurprising given that some variants of the former behave in ways that are similar to SWFs. One high profile example involves the attempted acquisition in 2006 of the UK-based Peninsular and Oriental Steam Navigation Company (P&O) by DP World, a SOE controlled by the United Arab Emirates. At the time, P&O held several management contracts for US-based seaports. These contracts would have transferred to DP World following a successful acquisition of P&O. This prompted concerns in the United States over national security given the sensitive nature of the assets in question; congressional leaders argued bluntly that ‘terrorists could … exploit the arrangement to slip weapons into American ports’ (Sanger and Lipton 2006). These concerns led to congressional action that ultimately thwarted the attempted takeover (Sanger 2006).

Despite being a SOE, and one that is completely unrelated to the Emirates’ SWF, DP World has been routinely considered in discussions of SWFs. Perhaps most prominently, DP World was referenced in a meeting of the Joint Economic Committee of the US Congress, which convened to discuss the potential security risks posed by SWFs to the United States (Schumer 2008). A report from the Peterson Institute titled ‘Sovereign Wealth Funds: The Need for Greater Transparency and Accountability’ similarly references the DP World controversy in support of its argument that the investment activities of SWFs should be more carefully regulated (Truman 2007).

The attempted acquisition of P&O by DP World was akin to a ‘friendly takeover’ of one company by another with shared business functions. However, a similar outcome could have materialized if a SWF attempted to purchase a controlling stake in P&O. This highlights the fact that SOEs and SWFs, despite being distinct institutions, can certainly behave in similar ways such that commentators lump them together. On this possible overlap in function, Backer (2010, 66) usefully
observes that ‘SWFs are creatures whose ordinary course of business is investment … [while] SOEs are not necessarily constituted to engage in … investment. Yet, SOEs can invest, and SWFs can acquire controlling interests in operating entities.’ He concludes that, despite some ostensible similarities, SWFs and SOEs are nevertheless ‘very different vehicles’ (2010, 66).

The distinction between SOEs and SWFs can become even more opaque given that some countries’ SWFs are actually operated by SOEs. Singapore’s SWF, for example, is administered by Temasek Holdings, a SOE that was created for that express purpose (Temasek 2015a). While Temasek is itself a SOE, the SWF of Singapore is not; rather, Singapore represents a case of a SOE managing an investment fund at the behest of its government. China’s SWF is similarly managed by a SOE, the China Investment Corporation, which was also established for that purpose (CIC 2015). Despite the apparent similarities and occasional overlap in function between these types of institutions, it is nevertheless important to emphasize that they are generally distinct in purpose and purview.

**SWFs: Trends and Characteristics**

Sovereign wealth funds have existed since the early 1950s. It is widely accepted that the first SWF was created in 1953 by Kuwait, and its government indeed advertises its SWF as the ‘oldest … in the world’ (Kuwait Investment Authority 2013). SWFs have also proliferated in the international system in recent years. Since 2000, more than 18 countries have created new SWFs, nearly doubling their number internationally at a creation rate of around two new funds per year (Kunzel et al. 2011). While total counts of SWFs vary based on differing definitions, IMF analysts estimate that there are more than 50 currently operating worldwide, with around half this number being created in the past two decades (Klitzing et al. 2010). **Figure 1** plots the trend in the spread of SWFs internationally.

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4 Of course, there are many SWFs not managed by SOEs; some are managed by central banks, by ministries or departments of finance, or by other government agencies tasked with that function.
since their inception. The recent proliferation of SWFs globally is notable, and it raises questions about why and for what purpose states are increasingly choosing to create these distinctive institutions.

**Figure 1: Total SWFs in the international system by year**

In addition to increasing in number, SWFs have also grown in size, as measured by the volume of assets under their control. While estimates vary, virtually all analysts agree that the volume of capital wielded by the world’s SWFs is considerable. One IMF estimate forecast that the collective value of the world’s SWFs was $8 trillion in 2013 (Aizenman and Glick 2008), while a more conservative calculation suggested that SWFs controlled around $5 trillion that same year (al-Hassan et al 2013). Given trends in the creation and growth of SWFs over the past several decades, it is not unreasonable to assume that these figures will continue to grow into the future. One pre-global recession estimate from Morgan Stanley, for example, projected that the value of the world’s SWFs would be no less than USD $12 trillion by the end of 2015 (Jen 2007). Despite their differences,
each estimate suggests that the volume of assets under the control of the world’s SWFs is considerable.

Individual SWFs also vary along a number of noteworthy dimensions. These include, among others: individual size, sources of investment capital, degree of institutional transparency, and the political regime type under which they are constituted. Table 1 outlines the scale of these dimensions and identifies countries that control corresponding SWFs. I also elaborate on each in turn.

Table 1: Axes of Variation in the World’s SWFs

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<th>Dimension</th>
<th>Variation</th>
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<td>Size</td>
<td>Small</td>
<td>Brazil</td>
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<tr>
<td></td>
<td>Large</td>
<td>United Arab Emirates</td>
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<tr>
<td>Sources of Capital</td>
<td>Natural Resource Wealth</td>
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<td></td>
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<td>Foreign Exchange Reserves</td>
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<td></td>
<td>Profits from Investments or SOEs</td>
<td>Singapore</td>
</tr>
<tr>
<td>Transparency</td>
<td>Opaque</td>
<td>Kiribati</td>
</tr>
<tr>
<td></td>
<td>Transparent</td>
<td>Norway</td>
</tr>
<tr>
<td>Political Regime</td>
<td>Autocratic</td>
<td>Libya</td>
</tr>
<tr>
<td></td>
<td>Democratic</td>
<td>New Zealand</td>
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There is notable variation in the size of individual SWFs. Larger funds include some valued at more than USD $1 trillion each, while smaller funds include those valued at around USD $1 billion. Estimates of the size of individual funds tend to vary. This is because many SWFs are opaque even with regard to this type of disclosure. The SWF controlled by the United Arab Emirates, for example, is generally acknowledged as being among the world’s largest, but has consistently declined to publish information detailing the size of its investment portfolio. This has forced analysts to speculate its value, and unsurprisingly their estimates vary widely. One calculation
suggested that the Emirates’ SWF was worth roughly USD $500 billion by the end of 2006 (Roy 2006), while another proposed that its assets topped $875 billion only two years later (The Economist 2008). A more recent estimate placed the value somewhere between these figures at approximately $627 billion (Aridas, Pasquali, and Bedell 2012).

There are several other funds that likely match or exceed the Emirates’ SWF in size. The SWF operated by the government of Norway, for example, is putatively the largest in the world, and was reported to be worth more than USD $847 billion at the beginning of 2015 (NBIM 2015). The next four largest funds are believed to control more than $500 billion each (SWF Institute 2015). Several more are valued at more than $100 billion each, including funds from Singapore, Australia, Russia, Qatar, and others (SWF Institute 2015). At the low end, there are around a dozen SWFs estimated to be worth less than $1 billion each, including SWFs operated by Venezuela, Kiribati, and Indonesia, and others (SWF Institute 2015). These funds showcase the breadth of size across the world’s SWFs.

The sources of investment capital for SWFs are numerous, though it is worth reiterating that what unites these sources is that they constitute state-owned capital. Examples of funding sources include: revenues derived from the sale of natural resources or other commodities, repurposed foreign exchange reserves, profits generated from state-owned enterprises, revenues from the sale of government controlled interests in firms, general budget surpluses, and even taxes levied for that purpose. Kuwait’s SWF, for example, is capitalized with revenues derived from the sale of state oil resources (Kuwait Investment Authority 1953). Funds controlled by the United Arab Emirates, Saudi Arabia, and Norway are similarly capitalized by natural resource revenues. Australia’s SWF has been capitalized by periodic general budget surpluses, and by the sale of the government’s ownership stake in the telecommunications firm Telstra (Australian Department of Finance 2015).

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5 The Norwegian SWF is also atypically transparent, and routinely reports comprehensive details of both the size and composition of its investment portfolio.
The government of Singapore capitalized its SWF by selling government-owned slices of several companies, including among others ‘a bird park, a hotel, a shoe maker, [and] a detergent producer’ (Temasek 2015b).

China’s SWF showcases the variety of ways that governments can obtain capital to establish a SWF. In 2007, the government of China created a complex scheme whereby it issued special bonds denominated in renminbi (RMB), which were in turn purchased by a number of commercial institutional investors (Koch-Weser and Haacke 2013, 14). The proceeds from the bond issue were then used to purchase, from China’s central bank, foreign denominated currencies that were being held as forex. The transactions essentially swapped the international currencies with RMB to provide China’s SWF with a basket of international currencies to facilitate cross-border investing. Once capitalized, the SWF was required in turn to service the interest and principal debt on the special bonds that were issued to create it.

Why study SWFs?

While interest in SWFs appears to be emerging apace with their proliferation in the international system, they remain understudied in academia, notwithstanding small pockets in economics and business circles. Attention in political science has been even sparser, with only a few recent exceptions (i.e., Chwieroth 2014; Drezner 2008; Helleiner 2009). This has left a number of important and fundamental questions about SWFs unanswered, chief among these why some countries even decide to create them.

The small body of political science research that does exist tends to be dominated by questions of domestic and international security. Here scholars are generally devoted to understanding the potential costs and consequences of SWFs (Diwan 2009; Drezner 2008; Kern

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6 In 2009, the academic journal Geopolitics sponsored a small symposium focusing on the potential security consequences of SWFs.
2010; Kirshner 2009; Shih 2009; Summers 2007; Teslik 2009). The specific concerns here are varied, but generally emphasize the possibility that government principals might wield their SWFs to pursue geopolitical strategic goals rather than strictly commercial ones. These fears are compounded both by the sheer size of many SWFs, and by the fact that most operate with limited transparency.

It is perhaps unsurprising that existing research on SWFs has considered questions of security. This focus has been motivated largely by a number of incidents concerning sovereign entities undertaking suspicious or potentially threatening investment behaviors. The controversy surrounding DP World in 2006 is but one example of concerns that can emerge when international investors seek to acquire politically sensitive assets.

In another less publicized 2011 incident, Japanese regulators sounded alarms when a series of coordinated stock trades from Hong Kong provided an anonymous individual shareholder a 10 percent stake in the Tokyo Electric Power Company (TEPCO) (Bradsher 2011). The trades were ordered in the immediate wake of the Fukushima nuclear disaster when TEPCO’s stock prices were dropping precipitously, generating even greater suspicion about the investor’s motives. Investigators believed that the SWF operated by China deliberately organized the trades in a manner that allowed it to circumvent Japanese disclosure requirements, thereby secretly providing the Chinese government with a substantial ownership stake in Asia’s largest electric utility, all while preempting any attempts by the Japanese government to block such an effort (Bradsher 2011).

On investigation, the Japanese government discovered that China’s SWF had invested roughly USD $20 billion across a number of high-profile Japanese firms through similarly clandestine means (Fukase 2011, 24). Investigators discovered that the Chinese SWF had created several shell investment firms in Australia, and was utilizing these firms to mask the source of investment capital flowing into Japan. One such Australia-based firm was obscurely titled ‘SSBT OD05 Omnibus Account Treaty Clients,’ and over the course of six months in 2011 became one of
the largest individual stakeholders in several major Japanese firms (Fukase 2011, 24). At the end of 2011, for example, this obscurely named shell company appeared on registries as a top-ten shareholder for Toshiba, Shiseido, and Kirin Holdings. A separate Australia-based Chinese shell company appeared as a top-ten investor on registries for Sony Corporation, as well as the banking conglomerates Mitsubishi Financial, Mizuho Financial Inc., and the Sumitomo Mitsui Financial Group (Fukase 2011, 24).

High profile incidents such as these have no doubt played a role in generating scholarly interest in the potential security risks of SWFs. These concerns have also been mirrored in political circles. In 2008, the Joint Economic Committee of the US Congress convened a hearing to consider whether ‘sovereign wealth funds make the US economy stronger, or pose national security risks’ to the country (Schumer 2008). In his opening remarks, committee chair Charles Schumer articulated US government concerns over the investment activities of SWFs:

‘…it would be perfectly rational to expect a foreign government-controlled fund to have non-economic motivations. For instance, foreign governments might have an interest in controlling strategic assets, securing access to sensitive information or technology, promoting a political agenda, or cornering the market on raw materials’ (Schumer 2008).

Schumer invited testimony from a range of analysts, and concluded by recommending that SWFs operating in the US be subject to increased government oversight.

What is notable about existing interest and the small body of research on SWFs is that it is concerned primarily with their effects or consequences. Put differently, existing research has treated SWFs as independent variables used to explain other outcomes of interest. It is noteworthy, and perhaps curious, that scholars have first sought to understand the effects of SWFs without fully understanding their causes. This is partly because analysts who seek to examine the security and economic consequences of SWFs are in many ways operating with only a partial understanding of these institutions. To be sure, an understanding of the political causes of SWFs may well contribute to a better understanding of their effects. This is perhaps especially the case where analysts are concerned
with whether SWFs may be guided by political rather than strictly commercial motives. Without a doubt, existing and future research stands to benefit from an understanding of the political determinants of SWFs. This question therefore remains an important one.

**Existing and unsatisfying answers**

It is again notable that there have been so few efforts within IR to explain the spread of SWFs in recent decades. While several basic or anecdotal explanations exist, they typically fail to explain relevant and interesting patterns in the creation of SWFs across countries or over time. This reality leaves ample space for analysts who wish to expand our understanding of the political determinants of SWFs. Table 2 identifies a handful of these possible causes of SWFs.

<table>
<thead>
<tr>
<th>Explanation</th>
<th>Issue</th>
</tr>
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<tbody>
<tr>
<td>Natural Resources</td>
<td>Fails to explain non-resource based funds</td>
</tr>
<tr>
<td></td>
<td>Fails to account for timing of spread of SWFs</td>
</tr>
<tr>
<td>Political Regime Type</td>
<td>Fails to explain democratic funds.</td>
</tr>
<tr>
<td>Saving for the Future</td>
<td>Unfalsifiable</td>
</tr>
<tr>
<td></td>
<td>High risk among alternatives</td>
</tr>
<tr>
<td>Excess Capital</td>
<td>Necessary but not sufficient</td>
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</table>

These include explanations that emphasize natural resource wealth as the root cause of SWFs, explanations that link SWFs to autocratic regimes, suggestions that states create SWFs merely because they wish to ‘save for the future,’ and explanations that frame SWFs as a consequence of the accumulation of excess capital. As noted, these potential explanations are problematic for a

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7 Chwieroth (2014) stands as a lone and recent exception to this trend, and similarly acknowledges the curious lack attention to SWFs in IR in offering his own novel theory.
number of reasons. In this section, I elaborate on each of these possible explanations before turning to a lone theory from within IR before concluding the chapter.

SWFs are commonly associated with countries that export natural resources, and especially those that export large quantities of oil and natural gas (Diwan 2009; Kirshner 2009). This may be unsurprising given that among the world's top 20 oil exporters, 13 have created and operate SWFs. This has led some observers to presume that SWFs are merely an institutional byproduct of exporting large quantities of natural resources. And advancing a theory linking SWFs to natural resource exports is hardly a daunting task: exporting natural resources provides the state-owned revenue necessary to capitalize a SWF.

While perhaps not incorrect, this basic theory fails to explain variation in the existence of SWFs across countries. Not all natural resource exporters, including those that export primarily petro-resources, have created SWFs. Many major oil and natural gas exporters lack this type of institution. And while there may be some association between the two, there is certainly nothing inherent about exporting natural resources that causes governments to create SWFs. This logic also precludes any purposive choice on behalf of governments. While selling natural resources may provide the capital necessary for creating a SWF, there remain questions over why states would choose to utilize their capital in that way. After all, SWFs exist as one option on a menu for states that acquire large volumes of capital from exporting natural resources. It is also worth noting that not all countries with SWFs export natural resources in significant quantities. Indeed, some countries with SWFs, including sizeable ones, export virtually no natural resources. A natural resource-based theory of SWFs would fail to explain the existence of such funds.

The logic is also unable to explain the timing of the creation of SWFs in recent decades (see Figure 1). Resource rich states have been exporting since long before SWFs have emerged so

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8 I calculate this figure by cross-referencing oil exporting data available from the CIA World Factbook (CIA 2015) with a hand-coded database of countries with SWFs.
prominently in the international system. Possessing natural resources in abundance, a mostly time-invariant phenomenon, cannot in itself explain the timing of the upsurge in the creation of SWFs over the past two decades. Thus, while some source of capital, including revenue derived from oil and natural gas exports, is evidently a necessary condition for creating a SWF, it is hardly a sufficient one. This suggests that while the presence of large quantities of natural resources might be important to consider for understanding SWFs, it is not necessarily a primary determinant of trends in their creation in recent decades.

To a lesser extent, commentators have linked political regime type to SWFs. To be more precise, SWFs are often anecdotally associated with non-democracies (Garten 2008; Luft 2008). No doubt, this association is partly what generates security concerns related to the investment behaviors of SWFs. The logic here is that SWFs, like their autocratic government principals, will behave in a manner that is neither transparent nor accountable, thereby warranting additional scrutiny internationally. Drezner (2008, 115) broadly articulates the association between SWFs and autocracies when he writes, ‘many policy analysts argue that SWFs are symptomatic of shifts in the global distribution of power away from the advanced industrialized states and towards authoritarian, capitalist governments in the developing world.’

The popular association between SWFs and non-democracies is perhaps unsurprising. There is a widely acknowledged, though not uncontested, link between natural resource wealth and autocratic regime type (Haber and Menaldo 2011; Bearce and Laks Hutnick 2011; Ross 2001; Ross 2012). If many SWFs are capitalized from revenue derived from oil and natural gas exports, and if such natural resources are causally related to autocratic government, it follows that SWFs may themselves be a patently autocratic institution.

However, this potential explanation also fails to account for variation in the creation of SWFs across countries. Indeed, on inspection, autocracies and democracies appear roughly equally
likely to have SWFs. **Figure 2** shows the number of SWFs in the international system as of 2012 distributed by their host country’s level of democracy, measured by the Polity IV index (Marshall and Gurr 2013). Of note is that SWFs appear approximately evenly distributed across countries by regime type. While a handful of firmly autocratic countries have created SWFs, so too have a number of robust democracies. Many intermediate democratic and autocratic states have also done the same. This suggests that the decision to create a SWF may be only minimally, if at all, conditioned by regime type.

**Figure 2: Number of SWFs by Level of Democracy in 2012**

![Bar chart showing number of SWFs by level of democracy in 2012]

It is worth noting that some governments have at least nominally identified a reason for creating a SWF. For example, a handful of governments have created their funds to save for a ‘rainy day.’ The logic here is that governments can invest state money in a SWF with the expectation that they can draw upon it should difficult circumstances arise in the future. New Zealand’s SWF, for example, was created to help support future government expenses, including public retirement benefits and ‘other vital areas such as health, welfare, education and law enforcement’ (NZ
The government broadly articulates the purpose of its SWF as existing to ‘ensure a sustainable future’ for New Zealand. The government of Azerbaijan has similarly created a SWF for the benefit of ‘future generations’ and to provide ‘solution[s] of the problems of present generation[s]’ (Azerbaijan 2015).

These explanations provide a motive for why some governments might create SWFs, but they again fail to explain relevant variation across countries and over time. To be sure, all governments might wish to save for a ‘rainy day,’ and all might prefer to have a large SWF to help resolve problems affecting current generations. It is entirely reasonable to assume that all governments desire a ‘sustainable future,’ Despite this, not all governments have created SWFs, and there is nothing inherent about a desire to save for the future that causes governments to create them.

Further, given this particular motivation, saving in a SWF may be a distinctively risky choice. By design, SWFs invest most or all of their capital across borders. Governments that choose SWFs to save for future need are essentially gambling that future in markets that operate outside their political control. This exists in contrast to a number of other models that are notably less risky. The United States, for example, directs its Social Security Administration to invest capital from its trust funds solely in US government securities, which are widely regarded as one of the safest investment instruments in the world. Choosing to save by investing in markets outside one’s borders undoubtedly entails an added layer of risk, and there is evidence that such risk can be considerable.

In 2007, the SWF controlled by the UAE purchased roughly $7.5 billion worth of fixed-return securities from US-based bank Citigroup (Dash and Sorkin 2007). Under the terms of the agreement, the SWF would collect a guaranteed annual dividend worth 11 percent of its investment from Citibank before converting its securities into 235.6 million shares of common stock starting in March 2010 (Dash and Sorkin 2007; Wikileaks 2009). At the time of the initial transaction,
Citigroup’s stock was valued at roughly $37 per share, but subsequently dropped to below $3.50 per share. This amounted to a $4 billion loss on investment for the Emirates’ SWF.

The substantial investment loss prompted the Emirates government to register a complaint with the US Departments of State and Treasury, and to initiate sealed arbitration against Citigroup in US federal court in an effort to recoup its losses (Wikileaks 2009). According to diplomatic cables released by Wikileaks, the Emirates government accused Citibank of outright fraud. Despite its legal efforts, the Emirates’ SWF was unable to recoup its losses from Citigroup. This demonstrates the potential risk inherent in cross-border investing for SWFs. To be sure, there is nothing inherent about a desire to save for the future that might cause governments to create SWFs, thereby accepting such risks.

Possible theories for the spread of SWFs have also emerged from disciplines outside of political science. Scholars in economics and business, for example, have offered potential explanations that emphasize, unsurprisingly, economic or business considerations that may drive the creation of SWFs. However, as with earlier possible explanations, these are typically merely anecdotal, or are otherwise unable to explain variation in the creation of SWFs across countries and over time. For example, economic analysts have proposed that states create SWFs because they require a place to store excess foreign exchange reserves (forex) (Aizenman and Glick 2008; Lu, Mulder, and Papaioannou 2010). This logic suggests that states create SWFs merely as a response to the challenges they encounter when they accrue too much foreign-denominated capital.

This possible explanation remains unsatisfying for reasons similar to those addressed earlier. First, a forex-based theory of SWFs fails to explain variation across cases; not all countries with large volumes of forex have created SWFs, and not all countries with SWFs have accrued or maintain atypically large amounts of reserves. Neither can this logic account for the timing of creation of SWFs, which are again a relatively recent phenomenon. States have maintained and accrued large...
volumes of forex for much longer than SWFs have existed. Last, this explanation is typically only presumed in passing as analysts examine other aspects of SWFs. As yet, there appears to be no substantive theory or empirical tests to demonstrate a causal relationship between levels of forex, on one hand, and the likelihood of creating a SWF, on the other. This explanation thus remains largely anecdotal. While it is likely the case that large volumes of forex are relevant for understanding the creation of some SWFs – indeed, excessive forex can undoubtedly provide a source of capital for creating a SWF – this factor seems unlikely to be a primary driver of their spread in recent decades.

Business scholars have suggested that states create SWFs in order to diffuse corporate ownership globally, or alternatively to create international business opportunities for host country industries (Kern 2010). As with other possible explanations, these too fail to explain variation in the creation of SWFs across countries and over time. To be sure, many countries might wish to facilitate business opportunities for their domestic industries, or to diffuse corporate ownership more widely. Of course, not all of these countries create SWFs to achieve these goals. These explanations similarly tend to be presumed in passing, and there appear to be no systematic tests of any causal relationship between a desire to diffuse corporate ownership, or to facilitate new business opportunities, and the likelihood of creating a SWF.

*An existing explanation*

These possible explanations for why states create SWFs are largely unsatisfying. This is because many are overly narrow, and as a consequence generally fail to explain variation in the spread of SWFs across countries and over time. This reality suggests that the question motivating this dissertation remains essentially unanswered. Further, given growing political and scholarly interest in the possible causes and consequences of SWFs, a solid understanding of their determinants is becoming increasingly important.
Chwieroth (2014) acknowledges the unusual lack of any systematic political explanations for why states create SWFs, and proposes a largely constructivist theory to fill this gap. Drawing on sociological institutionalism, he argues that governments create SWFs due to a process of ‘mimesis,’ wherein actors emulate the policy choices of their peer groups (2014, 755). For Chwieroth, SWFs represent ‘a model with normative and epistemic appeal that … [have] trigger[ed] a process of cross-national diffusion’ of SWFs across country peer groups (2014, 755). Key to this understanding is the logic that countries with similar characteristics are likely to emulate their peers’ strategies in addressing related policy challenges. This explanation suggests that SWFs are a ‘fashionable’ response to common challenges among certain groups of states, and it indeed accounts for recent trends in their creation across countries over time.

It is likely true that an emulation dynamic shapes states’ decisions to create SWFs. The fact that some states have highly visible SWFs places this choice on a menu for other states that might be in a position to create a similar institution. This necessarily implies some sort of emulation effect that shapes the context out of which the decision to create a SWF is made. However, this explanation supposes that the decision is less of a purposive one, and more about governments merely embracing a ‘fashion or fad’ (Chwieroth 2014, 752). This largely marginalizes the possibility that the decision to create a SWF might be much more strategic and purposive, and it removes much agency from the processes surrounding the decision to create a SWF.

This is somewhat puzzling given that Chwieroth (2014, 755) also acknowledges that ‘the effectiveness of SWFs … remains highly uncertain’ and that there are ‘significant political and financial costs’ associated with creating them. The nontrivial costs of starting a SWF coupled with the prospect of ‘uncertain effects’ would suggest it improbable that a state would create a SWF merely because it is ‘fashionable’ to do so. To be sure, most political leaders could readily devise alternatives to a SWF for allocating billions of dollars. This calls into question the logic that the
choice is primarily driven by ‘fad’ rather than something more purposive or substantive. Thus, while a useful start, a diffusion-based political theory of SWFs is also somewhat unsatisfying. While there is a likely role for mimesis in explaining the spread of SWFs in recent decades, it seems unlikely that states passively create them merely because their peers have done the same; rather, the costs and risks involved with creating a SWF suggest a calculation altogether more strategic and purposive. This observation constitutes the point of departure for my own argument, to which I turn in the following chapter.

**Conclusion**

In this chapter I have sought to establish the question motivating this dissertation as one that is both interesting and one that remains unanswered. Critical to this effort is advancing and defending a coherent working definition of SWFs to guide the remainder of this analysis; indeed, the fact that different analysts have relied on such widely differing definitions of SWFs reveals that they remain an understudied institution. I have also reviewed a handful of possible explanations for why governments create SWFs, and have shown them to be largely unsatisfying in their ability to explain variation across countries and over time. This underscores the fact that there is much space for theorizing about the political determinants of SWFs. Such is the task that I undertake in the next chapter.
Chapter 3: Argument

In the previous chapter, I presented the question motivating this dissertation: why do some states have SWFs, while others do not? I then justified it as one that warrants scholarly attention. In examining a handful of ostensible explanations for why states create SWFs, I concluded that many are merely anecdotal, or otherwise incomplete and unsatisfying. The lack of any systematic explanations for why states create SWFs is all the more curious given growing levels of political interest in these institutions in recent years. Further, the majority of the already limited body of scholarship concerning SWFs has tended to focus on their effects rather than their causes, despite the fact that a better understanding of the latter no doubt stands to enrich our understanding of any potential harmful effects of SWFs.

The task of this chapter is to break with this pattern and to advance a theory explaining why some states have SWFs, while others do not. In the following pages, I outline my argument for why states create SWFs. I propose that relatively vulnerable medium-powers with politically secure leaders are the most likely to create SWFs. The remainder of this chapter is devoted to elaborating on this argument, which leads to a series of testable hypotheses, to which I turn in the next chapter.

Summary of the Argument

In short, I argue that states create SWFs as a type of insurance against external risks that arise from participating in the global economy. These risks grow more acute for states as they integrate more deeply into world markets, and they manifest in a number of ways, ranging from economic shocks that primarily threaten states at the domestic level, to security externalities that arise at the system level. Of course, SWFs remain a relatively rare institution despite the fact that most, if not all, states are exposed to some degree of external risk. While they can be particularly effective in insulating states against harm, SWFs remain scarce because they are both politically and
financially costly for governments, and because not all states stand to benefit equally from having one.

Considering the costs and the benefits of a SWF gives rise to a ‘Goldilocks’ explanation for when states are the most likely to create them; governments must be able to afford the substantial costs, financial and otherwise, of creating a SWF, but they must also anticipate benefits sufficient to outweigh such costs. Where states cannot afford the costs of a SWF, they are unlikely to create one. Where states fail to anticipate any significant benefits from a SWF, they are similarly unlikely to create one. In other words, the conditions underlying this cost-benefit calculus need to be ‘just right’ for states to create SWFs.

If states are indeed utilizing SWFs as a type of insurance against risk, the foregoing logic suggests a ‘sweet spot’ for when states are the most likely to create them. I propose that medium-powers, and relatively exposed ones, in particular, occupy this sweet spot, and are therefore the most likely to create them. In addition to these conditions, I propose that political leaders must be relatively secure in office before initiating the creation of a SWF due to related concerns over the costs of such an institution. The remainder of this chapter is devoted to elaborating on this argument.

**Structure of the Argument**

The chapter proceeds in three sections and a conclusion. Because the starting point of my argument is that states create SWFs as a type of insurance against the risks of participating in international markets, the **first section** discusses the nature of these risks in greater detail. Joining global markets creates risk for states at both the international and domestic levels; internationally, economic cooperation threatens to upset relative power dynamics between states by generating a host of security externalities. At the domestic level, cooperation renders national economies vulnerable to a number of external shocks. These shocks can, in turn, threaten the stability of
governments and the welfare of their publics. Elaborating on the nature of these risks is necessary to establish a backdrop against which the strategic decision to create a SWF is made.

States are not without recourse in the face of risk, and the second section examines several ways in which they typically respond to these risks. Here I position SWFs as one such possible response, and I elaborate on the ways in which they help protect vulnerable states. An understanding of the benefits of SWFs is necessary for theorizing about the conditions under which states are the most likely to create them.

The third section turns to these conditions. While all states might welcome the benefits of SWFs, not all states create them. This is because they remain a costly choice from a menu of options, and because not all states stand to benefit equally by having one. To illustrate the decision-making process surrounding the creation of a SWF, I propose a series of tradeoffs that governments encounter as they consider creating a SWF. The first tradeoff considers the political costs of allocating public money to a SWF over alternatives. The second examines the cost-benefit calculus involved with creating a SWF, which juxtaposes high financial costs against expected future gains. The third tradeoff factors in a state’s relative vulnerability in assessing expected benefits of a SWF. Based on this reasoning, I conclude that especially vulnerable medium powers with politically secure leaders are poised to benefit the most from having a SWF vis-à-vis its costs, and as such are the most likely to create them.

The degree of a state’s vulnerability in the global economy is in many ways a function of its economic policies, but systemic risk is not constant. Periods of elevated risk, including global and regional economic crises, can render states more vulnerable regardless of their policies. I propose that these periods can similarly motivate states to create SWFs. This represents an important test for my broader argument that the spread of SWFs has been driven by risk. Periods of economic crisis typically strain state budgets as incoming revenues drop while pressure to spend frequently increases.
In this environment, it seems unlikely that states would allocate billions of dollars to create a SWF. However, this may be probable if SWFs are indeed a unilateral state response to external risk.

**The Risks of Participating in Global Markets**

Before outlining the ways in which SWFs can work to insure states against the risks of participating in the global economy, it is useful to understand the nature of those risks. This exercise is also important for positioning SWFs at the nexus of economic cooperation and interstate security, two areas of substantive and enduring importance to scholars of political economy. Understanding risk, and conceiving of SWFs as a response to it, is equally helpful for explaining the timing of the spread of SWFs in recent decades. This is a feature of SWFs for which a number of prospective explanations have been unable to account; as a unilateral state response to risk, it is perhaps unsurprising that SWFs have accompanied the resurgence of international economic liberalization in the 20th and 21st centuries. As more states have begun to cooperate more deeply, risk has increased, forcing governments to respond accordingly. Understanding these risks is thus an important piece of the broader puzzle underlying the spread of SWFs in recent decades.

There are well-established links between security, both at the domestic and international levels, and participation in global markets. International monetary, financial, and trade cooperation yields exceptional benefits for states, but neither is such cooperation without risk. These risks include problems that arise due to normal market fluctuations, problems associated with security externalities that accrue over time, and even problems that emerge from noncooperation when a cooperative outcome was expected. If states wish to reap the benefits of international markets, they must expose themselves to some level of risk.

Below I explore the nature of such risks in greater depth. While they are interrelated, I distinguish between risks that manifest primarily at the system level from those that primarily affect
states nationally and subnationally. This distinction is also helpful for thinking about SWFs as an institution capable of insulating states in multiple ways simultaneously. Table 1 identifies risks that arise from economic cooperation at different levels for states, and then highlights the ways in which SWFs are well positioned to help states address these risks. I discuss these in detail in the coming sections before turning to a discussion of the conditions under which states are the most likely to create them.

<table>
<thead>
<tr>
<th>Level</th>
<th>Consequence of Participating in Global Markets</th>
<th>Function of SWF</th>
</tr>
</thead>
<tbody>
<tr>
<td>System</td>
<td>Negative Security Externalities</td>
<td>Signal State Power</td>
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<tr>
<td></td>
<td>Relative Power Shifts</td>
<td>Deter Opportunistic Behavior</td>
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<td></td>
<td></td>
<td>Support Military Action</td>
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<tr>
<td>State</td>
<td>Trade Instability</td>
<td>Support Monetary Policy</td>
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<td></td>
<td>Exchange Rate Volatility</td>
<td>Manage Exchange Rates</td>
</tr>
<tr>
<td></td>
<td>Volatility in Capital Flows</td>
<td></td>
</tr>
<tr>
<td>Individual</td>
<td>Dislocation of Groups and Individuals</td>
<td>Support Welfare Policies</td>
</tr>
</tbody>
</table>

System-level Risks of Participating in the Global Economy

Under international anarchy, concerns over relative power are inevitably tied to economic integration (Baldwin 1985; Hirschman 1980; Krasner 1976; Gowa 1994; Gowa and Mansfield 1993). This is because the latter produces security externalities – positive and negative, alike – for all states involved. While virtually universally regarded as Pareto-improving, economic integration nevertheless generates wealth and other resources that can alter relative power dynamics between states. Trade, for example, creates wealth for states and simultaneously frees existing resources through efficiency gains. These gains can, in turn, be used to strengthen the state and to enhance its military capabilities, thereby boosting its power position relative to other states.
While there is considerable debate over when, and the extent to which, concerns over relative power can inhibit economic cooperation, the security externalities tied to such cooperation are nevertheless an enduring preoccupation for states under international anarchy. Under such conditions, states must advance and vigilantly protect their national interests vis-à-vis other states, lest they find themselves weakened relative to others. These pressures are especially acute relative to potential rivals. This reality triggers a number of unilateral responses from states, including efforts to manipulate international markets in an attempt to ensure a favorable distribution of wealth and benefits (Gilpin 2001, 77). Such pressures can also motivate states to cheat or defect from their agreements, particularly when such actions might be beneficial.

This has led one analyst to characterize the turbulent politics of participating in global markets as repeating cycles of ‘… trade wars and tariff truces, financial panics and rescues, [and] competitive devaluation and monetary stabilization’ (Oye 1985, 1). Against this backdrop, states are forced to remain cognizant of the risks that arise for them as members of the international economy, and they must respond accordingly. Indeed, here I propose that creating a SWF represents one such strategic act that can help minimize risk in this environment.

**Domestic-level Risks of Participating in the Global Economy**

In addition to generating concerns over relative power at the system level, exposure to global markets creates a host of national risks for states. Lowering tariffs and rolling back capital restrictions renders national economies vulnerable to a host of potentially harmful market fluctuations and external shocks. These shocks can take a number of forms, including instability in

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9 Indeed, it barely warrants mention that such debates have remained a central preoccupation and have constituted a major research program within IR for much of its history (i.e., Axelrod 1984, Baldwin 1993; Grieco 1988, Jervis 1978, Oye 1985; Snidal 1991).
trade, unfavorable exchange rate shifts, and volatility in capital flows. Each of these factors of risk portends its own set of consequences, and I address each in turn.

Lowering trade barriers yields a number of significant benefits for states, but it simultaneously gives rise to an array of risks, including broadly the possibility of unfavorable changes to a country’s terms of trade (ToT). It is well established that deterioration in a country’s ToT can harm national welfare considerably (Funke, Granziera, and Imam 2008; Krugman, Obstfeld, and Melitz 2015). Worsening ToT can reduce national income substantially, for example, and it can simultaneously drain wealth from the economy as the costs of imports outpace income derived from exports. Such changes can ripple through an economy and harm firms and individuals, as well. Further, unfavorable changes in the ToT can result in corresponding shifts in a country’s balance of payments position, which portends its own related set of consequences (Rodriguez 1976).

Perhaps most severe, unexpected shocks or ongoing volatility in a country’s ToT can significantly hamper long-run economic growth (Easterly et al. 1993). These risks are particularly acute for small and medium-sized economies, and for countries that export only one or a few distinctive products (Easterly and Kraay 2000; Harden 1985). Worse, the lingering negative effects of ToT shocks on economic growth are often reinforced by international consumption and investment patterns. Because these patterns exist beyond the immediate control of home governments, they can confound domestic efforts to recover from shocks or volatility (Funke, Granziera and Imam 2008). This reality has led Rodrik (1999, 385) to observe that ToT shocks can ‘often cripple economic performance to an extent that is vastly disproportionate to [their] direct economic consequences’ over the short term.

In addition to risks of trade, conditions of de facto capital mobility expose states to additional – and related – sets of possible external shocks. Perhaps most broadly, when states liberalize their capital accounts, they must notoriously forego either domestic monetary policy autonomy, or the
ability to achieve exchange rate stability (Mundell 1968). Neither choice, or any intermediate combination therein, is without its own set of consequences; without domestic monetary policy autonomy, for example, governments, or their central banks, are unable to wield exchange rates to achieve domestic price stability. Alternatively, without the ability to achieve exchange rate stability, governments must generally allow the value of their currency to fluctuate according to international market forces, with potentially harmful consequences as a result. Indeed, the specter of such consequences has led some major developing economies, most notably China and India, to buck trends toward financial integration in favor of retaining significant controls on their capital accounts (Krugman, Obstfeld, and Melitz 2015, 698).

More acute risks of capital mobility exist as well. The relative absence of capital controls internationally allows vast amounts of capital to move virtually unfettered across borders. This has enabled widespread short-term speculative investing, particularly in emerging markets, with nontrivial sums of capital (Gilpin 2001, 263). Such practices are a permanent fixture in a world of globalized finance, and they are widely believed to reduce global economic stability. Capital openness has also been linked to recurrent financial and banking crises as international investors variously flood or drain national economies of capital in pursuit of better returns (Dailami 1999; Kindleberger 1979; Radelet and Sachs 1998; Reinhart and Rogoff 2009). One needs look no further than the Mexican and Asian financial crises of the 1990s, or the Global Financial Crisis of the late-2000s to observe the ways in which international financial market forces can wreak havoc on domestic economies.

Finally, at the individual level economic and financial integration generates winners and losers as some groups benefit, while others suffer, from exposure to international markets (i.e., Frieden 1991; Hiscox 2001; Jones 1971; Samuelson 1971; Stolper and Samuelson 1941). This has the effect domestically of redistributing resources and wealth, realigning and exacerbating social,
political, and industrial cleavages, and generating inter-group friction and political conflict in the process (Gourevitch 1978; Rogowski 1987). Such are the virtually universally acknowledged distributional consequences of international trade and financial liberalization, and states are invariably forced to tolerate changes to the status quo, and address the associated consequences, in the context of these processes.

In sum, international economic participation portends a number of risks for states at both the international and domestic level. If states wish to reap the benefits of entering global markets, they must expose themselves to such risks. Establishing a SWF is one way that states can achieve security in this environment. Before I turn to the precise ways in which SWFs work to protect states from outside risk, I discuss a number of existing alternatives. This exercise is important because in the following section I situate SWFs as complements, if not complete substitutes, to a number of strategies that states already employ. Illustrating existing strategies thus lends itself to understanding the ways in which SWFs can work to insulate states against outside risk.

**State Responses to External Risk**

States are not without recourse when confronted with external risk, and it is widely acknowledged that they engage in strategic behaviors – both at the international and domestic level – designed to insulate themselves from such risks. Indeed, it is the central argument of this dissertation that IR scholars should begin thinking about SWFs as one possible instrument that states can deploy to help insure against the risks and challenges of participating in the global economy. Below I discuss a number of common strategies that states utilize in response to these risks. I select these strategies because SWFs can act simultaneously as complements, if not complete substitutes, to them for states. I discuss this in turn.
States have long engaged in strategic behaviors aimed at hedging risk. With regard to the negative security externalities attached to international trade, for example, scholars have shown that states are more likely to engage in freer trade within political and military alliances than they are outside such alliances (Gowa and Mansfield 1993; Long and Leeds 2006). This is because trading within the context of a military alliance works to mitigate concerns over relative power shifts for states; while such trade practices indeed generate wealth that can be used to enhance a trade partner’s military capabilities, the likelihood is minimal that such practices will contribute to enriching and strengthening a possible rival. Rather, trading within a military alliance can have the effect of increasing the relative power position of the alliance itself vis-à-vis potential adversaries, including individual states or blocs of allies, thus benefiting both trade partners alike. Increasing aggregate wealth within an alliance benefits all parties, after all, and it also enables the ability of one party to enhance its military position without increasing insecurity among its friends. In this way, military alliances can turn negative security externalities into positive ones in meaningful ways. Trading within military alliances is one way that states can work strategically to mitigate the risks tied to engaging in economic cooperation in an anarchic international system.

States can address international and domestic risk concerns simultaneously by joining international trade institutions. Joining preferential trade agreements (PTAs), for example, can enhance states’ bargaining leverage within the WTO vis-à-vis other states while providing them with access to different forums for formal dispute settlement (Busch 2007; Davis 2012; Mansfield and Reinhardt 2003). Enhancing bargaining leverage within the WTO helps minimize the possibility that more powerful states will dominate negotiations and subsequently impose conditions that are potentially unfavorable to weaker states. Leverage also helps weaker states extract the best possible terms from future bargaining, ensuring that the wealth and other gains from trade are distributed in favorable ways, and especially in ways that do not disproportionately benefit possible rivals. Further,
gaining access to forums for formal dispute settlement can ensure the possibility of recourse against cheating while leveling the playing field between states where power dynamics may otherwise dominate adjudication.

With regard to domestic economic insecurity, joining international trade institutions can insulate states against trade volatility and terms of trade shocks (Mansfield and Reinhardt 2008). Beyond the conventional goal of lowering trade barriers, trade institutions are also designed to help reduce volatility in the flow of international trade, which in turn contributes to stability in the prices of traded goods. These added benefits of trade institutions are quite welcome to states that are particularly vulnerable to trade volatility and import/export price instability. Given these benefits, joining trade institutions can be interpreted as another strategic act on behalf of states wishing to insulate themselves at the domestic level from the consequences of external risk.

It is worth mentioning that strategic behavior of this kind is not limited solely to trade or economic institutions; states routinely build risk-related provisions into agreements that span a host of issue areas. For example, when faced with uncertainty over the future distribution of benefits among parties to international agreements, Koremenos (2005, 562) finds that states include flexibility provisions that amount to ‘a kind of international insurance.’ Taking as her primary example finite duration clauses, Koremenos (2005) argues that such provisions enable states to accrue gains from cooperation while allowing for renegotiation into the future. Such features may be particularly desirable for states fearing that the distribution of gains will evolve over time in ways that disproportionately benefit other states. Finite duration provisions help preclude this possibility by enabling parties to return periodically to the table to renegotiate the most favorable terms possible given changing circumstances. Devising international agreements that include such provisions is yet another way that states can strategically hedge against the external risks tied to cooperation.
States similarly engage in a host of behaviors at the domestic level that are aimed specifically at providing insulation from the risks attended by global economic cooperation. One such virtually universal practice is maintaining foreign exchange reserves (forex). As one group of analysts state plainly, maintaining forex provides states with ‘a cushion against national economic misfortune’ (Krugman, Obstfeld, and Melitz 2015, 332). Toward this end, states can deploy their reserves in a number of interrelated ways. For example, reserves can be actively acquired or sold in private asset markets to adjust the domestic money supply, thereby influencing domestic macroeconomic conditions. This process is typically undertaken by central banks in support of governments’ monetary policy goals. Similarly, reserves can be used directly to finance current account deficits (or to offset surpluses) to maintain balance of payments equilibrium. This sterilization function can similarly help governments manage the domestic money supply by insulating it against pressures brought on by balance of payments surpluses or deficits (Krugman, Obstfeld, and Melitz 2015, 500), and by extension it can stave off many of the unwelcome consequences of disequilibrium.

Perhaps most common, states can use forex to intervene directly in foreign exchange markets to achieve some desired currency valuation (IMF 2013). This process can be utilized to shield specific domestic groups from the consequences of an over- or under-valued currency. Here even states that adopt a laissez-faire policy toward exchange rates can benefit from having the ability to intervene periodically in foreign exchange markets. For countries that adopt a fixed exchange rate, holding ample forex is especially vital, as maintaining the ability to preserve a target currency valuation against countervailing market forces is paramount. Further, given that a fixed exchange rate can serve as a powerful credible commitment mechanism over states’ economic policies, and in particularly states’ commitment to manage inflation and abstain from monetary opportunism, maintaining forex sufficient to defend that commitment is essential (Broz 2002).
Maintaining forex can also contribute to a state’s economic stability by working to prevent problems from emerging a priori. Sizeable reserves can work to assuage investor speculation over impending changes in a state’s exchange rate, for example, thereby dampening potentially destructive market volatility. This, in turn, can work to prevent the occurrence of financial crises and capital flight that often follow sudden changes in the value of a state’s currency. The net outcome of this process is more economic stability, and thus less risk, for states. Given their promised benefits in the face of risk, many states maintain considerable forex, including some with the equivalent of trillions of USD in assets, and still many others with hundreds of billions (IMF 2012). The fact that forex are, by design, typically idle implies nontrivial carrying and opportunity costs for states that maintain them. To be sure, USD trillions in reserves could be put to alternate use by most governments. The fact that states are willing to tolerate the costs of maintaining such large quantities of wealth in reserve underscores the importance of forex as a strategic buffer against economic misfortune.

Exposure to international markets ushers a host of other strategic government behaviors aimed at insulating publics. For example, scholars have long observed a relationship between economic openness and increased welfare spending and other government transfers (Cameron 1978; Gourevitch 1986; Katzenstein 1985). Others have observed significant increases in the size of government itself, as measured not only by welfare spending, but also by government consumption and by the size of budget deficits (Easterly and Kraay 2000; Rodrik 1998). These actions reveal governments’ efforts to insulate their publics from the consequences of international market exposure, either directly by extending social and other welfare services, or indirectly by growing the size of government, thereby both expanding employment and increasing the government’s share of activity in the domestic economy. The general logic underlying these changes is that ‘[s]ocieties seem

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10 The causal link between international economic openness and welfare spending and other government transfers is not uncontested. Iversen and Cusack (2000) argue that domestic structural economic changes are the primary drivers of such government behaviors. However, these changes are typically coincident with, and are often hastened by, increasing participation in and exposure to international markets.
to demand … an expanded government role as the price for accepting larger doses of external risk … [and that] government spending appears to provide social insurance in economies subject to external shocks’ (Rodrik 1998, 998). Increasing the size and scope of government is yet another way that states insure at the domestic level against the risks attached to membership in the global economy.

In this section, I have reviewed a handful of the risks that states encounter when they participate in global markets. I have also discussed many of the numerous ways in which states respond to international exposure. I argue that scholars should recast their conception of SWFs as solely investment institutions by thinking about them also as another strategic response to external risk. In the next section, I outline a handful of ways in which SWFs are well situated to insulate states from such risks. Thinking about SWFs in this context, in turn, highlights the conditions under which states are the most likely to create them.

**SWFs as a Response to Risk**

Creating a SWF should similarly be understood as a strategic act undertaken by governments in the face of external risk. This is because SWFs provide insurance for states, both at the international and the domestic level, against the consequences of international economic exposure. Indeed, this insulating function is often performed in ways similar to the mechanisms outlined above. Below I elaborate on the specific ways in which SWFs can serve to insure vulnerable states against risk before turning to the conditions under which states are the most likely to create them. This leads to a set of testable hypotheses before I conclude the chapter.

**SWFs and Systemic Risk**

At the international level, SWFs can help assuage state concerns over relative power as they engage in deeper economic cooperation. This is true for two reasons, which I discuss in turn. First,
the capital controlled by a SWF can be repurposed for military use. Should the need arise, states can readily liquidate the investments in their sovereign portfolio to support or augment their military capability. Given the considerable size of most SWFs, this possibility is not inconceivable. Using resources in a SWF may also be a preferable alternative to existing choices for obtaining financing for military projects. It is not unreasonable to assume that drawing resources from a SWF would be less consequential than diverting resources from other spending priorities, for example, or by printing money, raising taxes, or borrowing (Poast 2015).

There is some evidence to suggest that states have indeed relied on their SWFs to finance military activities, albeit not as a direct response to external risk. In spring 2014, during the months surrounding the Ukrainian leadership crisis and Russia’s military invasion and occupation of Crimea, Russia’s Ministry of Finance on multiple occasions ordered its National Wealth Fund,\(^{11}\) to liquidate investments held in US dollars, euro, and pounds sterling (MFRFa 2014). The liquidated capital was when converted into rubles and transferred to Russian Federation government accounts.\(^{12}\) Before its annexation of Crimea, Russia amassed considerable military resources, including 150,000 troops, in strategic positions around the Crimean Peninsula (Higgins and Myers 2014; Myers 2014; Smale and Herszenhorn 2014). It also staged a series of coordinated military in the region drills involving the army, air force, and its Baltic naval fleet (Herszenhorn, Landler, and Smale 2014). It is not inconceivable that the capital drawn from its SWF helped Russia support the costs of these activities along with its annexation of Crimea.

It is worth noting that Russia’s Ministry of Finance reported that the purpose of the transfers from its SWF to the federation government was to ‘co-finance voluntary pension savings of Russian citizens’ (MFRFa 2014). It would be difficult, if not impossible, to verify this. Not only

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11 The National Wealth Fund, in addition to the Reserve Fund, comprise the two branches of Russia’s SWF.
12 Specifically, in April 2014, the fund liquidated investments worth approximately USD $118 million, £15.6 million, and €85 million. Three months later, the Fund further liquidated USD $39 million, £5.1 million, and €29 million (See MFRFa 2014).
are the operations of Russia’s SWF typically opaque, the government does not publicize precise information over these types of expenditures. Further, resources from Russia’s National Wealth Fund have been used routinely to supplement extra-budgetary spending despite certain restrictions on how funds should be utilized (Economist 2014; NRGI 2013).13 In particular, the Russian government has reserved the right to use its National Welfare Fund for any reason ‘during times of crisis,’ even though the fund’s ostensible purpose is to support the welfare of Russia’s population (Simola 2015). Even if the liquidated capital was not used directly to support Russian military activities, drawing on the SWF to supplement pension expenditures would free those resources from the federation budget to be used elsewhere, including for military purposes.

Subsequent to its invasion of Crimea, there is little doubt that the Kremlin has used its SWF to support military-related expenditures. In 2015, the government received permission to draw roughly $50 billion from its Reserve Fund, the sister branch of the National Welfare Fund that it drew upon previously. The resources from the Reserve Fund, which can only be spent with permission from the Duma, were allocated to support government expenditures, including substantial increases in military spending (Cullison and Ostroukh 2015; Ostroukh 2015). This even drew criticism from commentators who accused President Vladimir Putin of draining Russia’s SWF to support an unsustainable military ‘spending binge’ (Holodny 2015).

The Russian case illustrates that states can indeed utilize their SWFs to support military expenditures as need arises. It is probable that Russia drew upon its SWF to supplement the extra-budgetary costs of its invasion of Crimea. Given this example, it is not difficult to imagine the ways in which a SWF can work to allay concerns over relative power for states. Funds from a SWF can be readily deployed to finance military activities should the need arise. While the case of Russia does

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13 While the National Wealth Fund was ostensibly established to ‘support pension system of the Russian Federation [sic]’ (MFRFb 2015), it has been used to support a variety of expenditures, including construction costs for the Sochi Olympics. The fund has also been subject to charges of corruption and ‘embezzlement’ (Economist 2014).
not represent a relative power shift precipitating the use of a SWF to restore balance, it is conceivable that such a scenario could unfold, including under circumstances where relative power shifts are driven or hastened by forces linked to participating in international markets. This suggests that a SWF can indeed serve as welcome insurance for states as they integrate more deeply into the global economy.

A large SWF represents the ability of a state to readily augment its military capability if the need arises. This works to minimize relative power concerns because a SWF essentially represents a state’s potential, if not de facto, military power. While trade may enrich a potential adversary, maintaining a SWF works simultaneously to offset a controlling state’s concerns that such cooperation will yield any power shifts of serious consequence. States have less to fear from enriching possible rivals when they maintain their own deep reserves of fungible capital that can be turned to military use should the need arise.

A second and related way SWFs can work to allay concerns over relative power is by providing states with an ongoing deterrent capability. Not only can signals from a SWF assure the international community of a state’s potential military power, they can also deter actors from engaging in opportunistic or unwelcome behaviors that could otherwise facilitate relative power shifts in their favor. Recall that states face incentives to manipulate international markets to ensure a more favorable distribution of gains from economic cooperation. States can, for example, renege or cheat on their trade commitments, revalue their currencies to gain a competitive edge, or employ any number of other strategies designed to maximize gains from cooperation vis-à-vis other states.

A SWF can deter these types of behaviors in multiple ways. For example, much like sizeable forex, a SWF can signal a state’s ability to intervene in foreign exchange markets to adjust the value of its currency as needed. After all, capital in a SWF can be repurposed for this task just as easily as for military needs. This can deter speculative currency attacks by reassuring international actors of a
state’s ability to maintain the value of its currency indefinitely, including in the face of countervailing market forces. By extension, these signals can also work to prevent the investor flight and ‘crises of confidence’ that tend to be associated with speculation over potentially unfavorable currency movements. The net effect of the deterrent capability of SWFs is more stability for the states that control them.

Indeed, there is evidence that states have sought to use their SWFs in this manner. Amidst the economic fallout arising from Russia’s invasion of Crimea, Russia’s Finance Minister Anton Siluanov declared that that the Kremlin would wield its SWF to stabilize the value of the ruble (Flood 2015; Rautava 2015; Tanas, Andrianova, and Galouchko 2015). Russia issued these assurances at a time when the value of the ruble was declining precipitously due to declining oil prices, and successive rounds of international sanctions arising from its military activities. While Russia eventually abandoned its currency peg and floated the ruble, its actions illustrate that a SWF can also represent a state’s ability to ensure the value of its currency in ways that can stave off greater problems (Ostroukh 2014).

Deterrent signals create stability in other ways, too. For example, a SWF signals internationally the ability of a state to move investment capital into (or out of) a target country’s markets as desired. Notably, such investment decisions need not be motivated solely by commercial or economic considerations; indeed, in the previous chapter, I demonstrated that SWFs are entirely capable of basing their investment decisions on political considerations as well. Capital in a SWF can be used as both carrot and stick in this regard. The possibility of withdrawing sizeable investments from a target country’s economy can also work to deter unwelcome behaviors, given that such acts could incur harmful consequences. Indeed, one security concern cited by analysts concerned over the effects of SWFs is that they could be used to destabilize markets in target countries by virtue of the large volumes of capital under their control (Truman 2007). Having the option to wield capital in
a SWF as both carrot and stick can work to assuage concerns over relative power shifts by preventing problems from emerging \textit{a priori}. The signals sent by a SWF can create a welcome stabilizing effect that reassures states in the face of external risk as they engage in economic cooperation.

These functions may help explain why many states are so secretive about their SWFs. The relative opacity of many SWFs may be strategically advantageous. Recall that many states avoid disclosing information even over the size of their SWFs, much less the content and geographic distribution of their investment portfolios. This lack of transparency forces outsiders to speculate over such matters, and it permits states to maintain an aura of mystery about their SWFs that can work in their favor. Opacity may, for example, enable states to exaggerate or otherwise misrepresent their material capability to enhance the deterrent effects of their SWF, or to boost outside perceptions of how much convertible military power they possess. This strategic misrepresentation over material capabilities can also help states maximize leverage vis-à-vis other states (Fearon 1995). Further, the lack of transparency also permits states to cloak the investment activities of their SWFs, which can ultimately reinforce their deterrent and stabilizing effects. Under such conditions, threats to use a SWF as a ‘stick’ may be more credible because targets are unable to observe when and to what extent such actions may occur, and would thus experience more difficulty in trying to block or otherwise thwart such behavior. In this sense, states may have more to fear from the opaque or unseen.

\textit{SWFs and Domestic Risk}

There are several ways in which a SWF can work to buffer states from external risk at the domestic level, too. Perhaps most generally, revenue from a SWF can be used to support government spending. Returns from a SWF can be used to support specific welfare programs aimed at groups adversely affected by economic integration, for example, or to support social security...
programs more broadly. This function may represent the most direct way in which SWFs can insure against outside risk, and it is consistent with Rodrik (1998), who identifies direct welfare spending as one of the most common government responses to exposure to foreign economic risk. This mechanism also accords with the stated rationale behind why some states have created their SWFs; funds in both Australia and New Zealand, for example, state as one purpose the ability to supplement government welfare liabilities, and especially to support the provision of welfare payments and medical services to retirees into the future.

Beyond supporting welfare benefits directly, SWFs can be used to supplement general government spending. This function may be particularly valuable in the face of economic hardship when governments are likely to face budget deficits, or under conditions when spending needs otherwise outpace incoming revenue. This includes situations where a country’s terms of trade deteriorates, or when it faces significant export price instability. Using resources from a SWF to support government spending under these conditions may similarly be preferable to alternatives, including borrowing or raising taxes, and it allows governments to preserve or maintain the status quo in spending when faced with adverse economic conditions. The ability to supplement general government spending is consistent with the provisions of certain SWFs. The Norwegian SWF, for example, permits the government of Norway to incorporate ‘the expected real return of the fund’ into its annual budgets when necessary (NBIM 2015). This can provide a significant supplement to existing sources of revenue, and may be particularly valuable in the face of external volatility.

There are a handful of other less direct mechanisms by which SWFs can insulate states against external risks. These typically involve the ability of SWFs to support governments in their efforts to attain certain macroeconomic goals across a number of interrelated areas. This includes helping to stabilize the value of a state’s currency, for example, or to help finance or otherwise mitigate the consequences of balance of payments adjustments. The cumulative effect of these
benefits is more stability and insulation in the face of external economic shocks. Below I discuss each mechanism in greater detail.

One prominent way in which SWFs can insulate vulnerable states from external economic shocks is by acting to offset unwelcome pressures acting on the value of a state’s currency. Here, SWFs can be used to help countries achieve exchange rate stability, or to help them attain some desired currency valuation more broadly. This process is relatively straightforward: investments held in a SWF can be strategically liquidated and used to intervene in foreign exchange markets. Because SWFs are comprised by design of a range of international currencies, this remains a viable and potentially welcome function of this institution.

This mechanism may be particularly welcome to states as they integrate more deeply into the global economy, and in so doing experience more volatility in their balances of payments position. It is well established that persistent current account surpluses can exert upward pressure on the value of a state’s currency as international markets clear the imbalance, for example (Mundell 1960). Current account deficits can similarly work to depress the value of a state’s currency. Such are the exchange rate consequences of disequilibrium in states’ balances of payments. These effects may be unwelcome to states, given that currency over- or undervaluation can lead to a number of painful economic consequences for states. For example, an overvalued currency can harm export-oriented producers by making their products more expensive, and thus less competitive, internationally. An undervalued currency can erode domestic purchasing power while inflating the costs of imports.

States can use resources from their SWF to intervene in foreign exchange markets to offset these pressures. In this sense, SWFs can be used in a manner identical to forex. In Chapter 2, I discuss at length the ways in which SWFs are distinct from forex; while capital from a SWF can be used in a similar manner as forex, a SWF raises the possibility of additional benefits beyond traditional forex as well. For example, whereas foreign exchange reserves constitute mostly idle
capital and thus entail high carrying costs, capital invested in a SWF can yield substantial returns for investing countries. This suggests that a SWF may be a highly desirable complement, if not complete alternative, to traditional forex. A well-capitalized SWF can deliver the same benefits as forex while earning states money in the process. At a minimum, a SWF can allow states to pare their forex and thus minimize the costs of maintaining them as a strategic cushion against economic misfortune.

Capital in a SWF can be used to help states address a range of other issues related to balances of payments beyond exchange rates. Funds from a SWF, for example, can be used to help finance payments gaps in ways that allow states to avoid unwelcome changes in the domestic money supply. Generally, balance of payments surpluses tend to be associated with increases in the domestic money supply, while the inverse is true where countries run balance of payments deficits (Krugman, Obstfeld, and Melitz 2015, 501). States have long mitigated the economic consequences of unwanted shifts in the domestic money supply by using their central banks to engage in sterilization. Resources in a SWF can be used in a similar manner here. SWFs can be drawn upon (or further capitalized) to offset changes in the domestic money supply that correspond to imbalances of payments. This can help states maintain the macroeconomic status quo in the face of external pressures. Because SWFs hold most of their capital outside of the host country’s market by design, the possibility of using such funds to help manage the money supply is not inconceivable. Not only can SWFs help states manage the value of their currency internationally, they can also assist in managing the domestic money supply in response to external economic pressures.

I have shown that SWFs exist as a multipurpose tool for states to address external risk. This raises questions about the types of states that are the most likely to avail themselves of these benefits by creating a SWF. There are a number of nontrivial tradeoffs for states as they consider creating a SWF, and not all states stand to benefit equally by creating such an institution. Understanding these tradeoffs is essential to explaining why some states have SWFs, while others do not. Below I
propose three sets of tradeoffs that combined represent the decision pathways states travel en route to creating a SWF. Each leads to a set of testable hypotheses, to which I turn in the next chapter.

*Consideration I: Relative Cost vs Expected Utility*

SWFs are expensive institutions. Beyond the potential political costs of creating such an institution, substantial amounts of capital are necessary to create a functioning SWF. This is particularly the case where states might wish to maximize the risk-mitigating benefits of a SWF. This suggests that leaders need to undertake a calculation weighing the relative cost of creating a SWF against the expected benefits of having such an institution. This is particularly the case where alternatives to a SWF exist; in certain cases, maintaining modest *forex* might be a prudent alternative to a SWF given the costs of the latter. This would especially be the case if states did not anticipate reaping substantial benefits from a SWF. However, a SWF might be a preferable option if the costs are low vis-à-vis higher levels expected benefits, and so on.

In thinking about this tradeoff, it is useful to think about states’ economic power. This is because economic power, as conceived here, encompasses a state’s wealth potential, and because it provides a frame for thinking about the benefits a state might expect to accrue from a SWF. On one hand, economic power can help analysts gauge the ability of states to bear the costs of creating a SWF. The relationship here is relatively straightforward – states with more economic power presumably have more resources at their disposal, and can therefore create a SWF at a lower relative cost. Countries with less economic power are presumably in the opposite position; they likely have fewer resources at their disposal to devote to a SWF, and could therefore only create one at greater relative cost, if at all.

The second dimension of this tradeoff is also represented by economic power. This is because the size of a country’s economy is a useful mechanism for thinking about the general
benefits a state may expect to receive from a SWF, both domestically and internationally. It is well established that small states are more vulnerable to economic shocks than large ones, for example (Easterly and Kraay 2000; Harden 1985). The logic here is simple: larger economies are in a better position to absorb, adjust to, and recover from shocks than smaller economies. Given this, we might expect that states with smaller economies would anticipate accruing more benefits from a SWF than countries with larger economies. This is because the same types of external shocks pose a less serious threat to the latter group.

Countries with small economies are also presumably more vulnerable vis-à-vis other states in an anarchic international system. Insofar as the size of a country’s economy can roughly proxy its potential military capability, countries with smaller economies are relatively vulnerable, and likely have more to fear for relative power shifts as a result. Conversely, countries with larger economies are relatively invulnerable under international anarchy. While such countries are certainly mindful of relative power dynamics, they nevertheless occupy a position of relative prestige internationally by virtue of the size of their economies.

I propose that the foregoing suggests a parabolic relationship between economic power and the likelihood of creating a SWF. Given the cost versus expected utility tradeoff, I expect that medium economic powers are the states most likely to create SWFs. Small economic powers are more threatened by external risk, and may therefore wish to create a SWF as a tool to insulate themselves against external shocks, and to help mitigate concerns over relative power, but will likely lack the resources to do so. Given that typically large amounts of capital are necessary to create a SWF, the relative costs of doing so are likely to be prohibitive for states with smaller economies. These states may be forced to search for other ways to insulate themselves from the risks associated with participating in the global economy. Creating a SWF may simply be too costly for this group of states.
Powerful states, on the other hand, likely possess the resources to create a SWF at minimal relative cost, but probably stand to benefit less from having one. States that are already economically powerful lack the need for a SWF as a mechanism to signal their economic power internationally. Countries like the United States, Japan, and Germany, for example, would stand to gain little from the signaling function of a SWF. To be sure, the United States lacks the need for a SWF to communicate information over its existing and potential military power. Similarly, states like these stand to gain less from having a SWF as a mechanism for deterring or thwarting opportunistic behavior. There is little doubt internationally over the economic power of these types of states. Further, large economies are better positioned to respond to or absorb external economic shocks. By virtue of their economic power, these states are relatively less vulnerable, and they stand to accrue fewer benefits from creating a SWF as a result. Thus, as with states with small economies, I expect that states with large economies to be similarly less likely to create SWFs.

This leaves medium economic powers as the most likely candidates to create and maintain SWFs. This is because these states are economically weak relative to major powers, but nevertheless possess the resources necessary to capitalize a SWF. These countries occupy a sort the ‘sweet spot’ position in this tradeoff; they stand to benefit from the signaling function of SWFs, and from the stabilizing effects they can offer in the face of external economic risks. Simultaneously, the costs of creating a SWF are not prohibitive for this group of states. For medium powers, the relative cost of creating a SWF is minimal vis-à-vis the expected utility of possessing such an institution. Given this, I expect that medium economic powers are the states most likely to create a SWF. A hypothesis thus emerges:

\[ H_1: \text{Medium powers are more likely to create SWFs than small or large powers.} \]
Consideration II: Degree of vulnerability

I have established that SWFs are financially costly, and that the decision to create one likely emerges from related considerations. I also propose that medium powers are the most likely to create SWFs given the tradeoff between the costs and expected utility of having a SWF. Of course, not all medium powers have SWFs; while the costs of creating such an institution may be relatively low for such states, and while this group of states might stand to benefit from a SWF by virtue of their size, not all medium powers are equally vulnerable to external risk.

I have consistently emphasized that risks emerge for states as they engage more deeply in global markets, and that this is when SWFs may prove the most beneficial. Risk is likely the greatest for states when they are the most open economically. To be sure, states are the most vulnerable to trade volatility or terms of trade shocks when they maintain minimal barriers to trade. Similarly, states with completely open capital accounts are likely more vulnerable to global financial markets than are states that maintain capital controls. In this regard, more openness translates into greater risk for states.

I propose that the decision to create a SWF is therefore also conditioned on the degree of vulnerability of a state. Of course, because I do not anticipate a high likelihood of small or large powers creating SWFs, I expect that the decision to create one will factor in relative vulnerability solely for medium powers. Indeed, the degree of vulnerability is an additional dimension of expected utility for states. While it is likely true that medium powers are the most likely to create a SWF based on the tradeoff over cost versus expected utility, a relatively invulnerable medium power may have less to gain from a SWF than a highly vulnerable one. If SWFs are indeed a tool to insulate states against external risk, we should expect to see the most vulnerable states among this group to be the more likely to create this type of institution. A number of hypotheses related to states’ degree of vulnerability thus emerge.
H2: Among medium powers, those that are more vulnerable are more likely to create SWFs than those that are less vulnerable.

The foregoing conceives of risk in terms of state-level attributes. It is also possible to conceive of risk at alternate levels of analysis. Just as levels of risk vary at the state-level, so too do levels of risk vary at the international system level. There are distinctive periods in the international system when risk is higher for states that are integrated into the global economy. For example, global recessions and financial crises represent distinctive and measurable periods of acute risk at the international level. If SWFs are indeed a strategic response to external risk, we may therefore expect these periods to act as a catalyst for this type of institution.

This presents an important test for the risk-based hypothesis; global financial crises and recessions are periods where states see incoming revenue drop precipitously. This generates considerable pressure for states to shrink budgets, or to refocus spending on more urgent priorities, including the acute welfare needs of their publics and their economies more broadly. To be sure, allocating the equivalent of billions of USD for a SWF may be less politically and economically feasible in the context of an economic recession or financial crisis than under more favorable economic conditions.

If states indeed create SWFs as a response to external risk, we may therefore reasonably expect them to create them during or in the wake of such crises when systemic risk is the highest. This counterintuitive logic again represents an important test for the central argument of this dissertation. I thus propose an additional hypothesis relating to risk at the international level of analysis:

H3: Medium powers are more likely to create SWFs when systemic risk is high than when systemic risk is low.
Consideration III: Save vs Spend

Another major consideration governments face in relation to creating a SWF is whether doing so will be politically tenable. This is because there are significant costs, financial and political alike, associated with creating a SWF. Decision makers face a serious tradeoff between spending revenue in ways that could provide immediate and possibly enduring benefits, political or otherwise, or to save that revenue in some form for the future. This tradeoff emerges from the basic fact that some source of investment capital – in typically large volumes, no less – is a necessary condition for creating a SWF. Given that all governments are constrained by finite resources, setting aside revenue for a SWF can be a significant and potentially costly decision for leaders. This suggests that leaders may not opt for creating a SWF, even when their states are vulnerable, medium-powers.

Directing resources to a SWF implies a number of foregone benefits for political leaders. Saving scarce revenue has the effect of constraining governments’ general ability to spend, including in ways that could benefit them politically. Leaders could, for example, spend revenue on projects aimed at enriching public welfare, or they could simply return funds to citizens’ pockets. Leaders could also procure armaments, build domestic infrastructure, or spend in other ways aimed at strengthening the state. Leaders who spend in such ways stand to reap immediate political benefits for this choice. There is thus a serious tradeoff involved when decision-makers consider using resources to capitalize a SWF, even if that SWF may offer enduring benefits in the form of insulation against external risk into the future.

There is evidence that the decision to direct resources into a SWF has sparked political controversy in a handful of countries. When Russia created its SWF in 2004, the decision drew intense criticism from the government’s own Ministry of Economic Development and Trade, which believed that the resources would be better utilized if they were directed toward development and infrastructure projects (Fortescue 2010). The decision to create a SWF in Norway in 1990 drew
criticism from the public sector, labor unions, and other groups who sought higher levels of public welfare spending as an alternative to using resources to capitalize a SWF (Tranoy 2010). The creation of China’s SWF was similarly contentious, drawing debate from different government agencies vying for access to China’s foreign exchange reserves, which as mentioned in the previous chapter were the primary source of capital for its SWF (Liew and He 2010).

Given the menu of items competing for a slice of states’ finite budgets, it is not readily apparent why leaders might choose to allocate resources to a SWF rather than spend them. This is especially the case where the choice to save revenue may incur political costs for leaders. If spending on popular projects can contribute to political survival, abstaining from spending may well jeopardize it. Worse, while SWFs can certainly yield a number of promising benefits, these benefits are more abstract in character, and may not materialize (or be necessary!) until the distant future. In extreme cases, the decision to allocate resources for a SWF may create political liability for a present leader while only producing benefits that will accrue at some future date, and possibly for a different leader. For term-limited democrats or politically insecure autocrats, this possibility may create disincentives to direct resources into a SWF. Where political survival may be at stake, allocating resources for a SWF, and thus foregoing any anticipated benefits of immediate spending, may not be a politically tenable decision.

It is tempting to infer from this tradeoff a relationship between regime type and the decision to create a SWF. Given that autocrats are not accountable to their publics in the same basic ways that democrats are, it stands to reason that it may be easier for the former group of leaders to create this type of institution. The political consequences may be less severe, if they exist at all, for autocrats who forego spending to create a SWF. After all, dictators cannot be voted out of office for unpopular policy decisions. This logic would suggest that SWFs might be a distinctively autocratic type of institution, and commentators have certainly proposed this association anecdotally. Of
course, I have already suggested in Chapter 2 that SWFs appear roughly equally distributed between democracies and autocracies alike. Autocracies appear no more or less likely than democracies to create SWFs. However, given the fundamental differences between these two types of governments, questions arise about the types of leaders – dictators and democrats alike – who are best positioned to withstand the costs of creating a SWF. I address each type of leader in turn.

It is worth noting that while autocrats do not face the same leadership constraints as democrats, scholars have identified wide institutional variation within autocracies that influences the security of autocratic leaders (Cheibub, Gandhi, and Vreeland 2010; Kim and Gandhi 2010; Gandhi and Przeworski 2006). Scholars have also identified patterns across types of autocracies in relation to leadership security; Steinberg and Malhotra (2014), for example, find that monarchies tend to be embedded within regimes that afford them more tenure security than either civilian or military dictatorships.

Further, while autocrats cannot be removed from office through the same channels as democrats, mounting evidence suggests that they can nevertheless face substantial audience costs for malfeasance or unpopular policy decisions (Weeks 2008). This creates incentives for dictators to maintain bases of support while working to prevent the emergence of any significant political opposition (Kim and Gandhi 2010). Beyond distributing rents, implementing popular policies that benefit citizens is one approach to achieving these complementary goals (Wintrobe 1998). This includes responding to adverse economic conditions by providing some level of support or insulation for citizens (Blaydes 2011; Kim and Gandhi 2010). Notably, SWFs can assist dictatorships greatly in these efforts through many of the channels already addressed. In this sense, SWFs may assist dictators in consolidating their leadership and retaining it indefinitely.

These strategic behaviors underscore the reality that even dictators are mindful that their leadership security is not guaranteed. This logic, coupled with the fact that autocracies are just as
susceptible to external risk as democracies, suggests that autocrats stand to benefit from the
insulating effects of a SWF, but must also be in a position to withstand the immediate financial and
political costs of creating such an institution. Foregoing high priority spending in favor of
capitalizing a SWF may therefore entail real consequences for dictators.

The foregoing suggests a leadership security story behind the decision to create a SWF.
Secure leaders, including both popular democrats and stable dictators, are undoubtedly in a better
position to withstand the short-term costs of creating a SWF. Indeed, such leaders may be ideally
situated to endure the costs until the benefits of a SWF begin to accrue. This leads to testable
hypotheses about leadership security and the likelihood of creating a SWF.

**H4:** Politically secure leaders are more likely to create SWFs than politically insecure ones.

**Conclusion**

In this chapter, I have established the backdrop against which the decision to create a SWF
is made. As states integrate more deeply into the global economy, they encounter a number of risks
at both the international and domestic level. I have proposed that SWFs are one strategic option that
states can employ in the face of such risks. I then outlined the conditions under which states are the
most likely to create SWFs in this context. This has led to a series of testable hypotheses to which I
turn in the next chapter.
Chapter 4 – Empirical Tests

In Chapter 3, I outlined my argument for why states create SWFs. I proposed that SWFs are an institution well suited to help states address risks that arise from participating in global markets. In conceiving of SWFs in this manner, I examined the conditions under which states are the most likely to create them. I reasoned that relatively vulnerable, medium-powers with secure leaders are the states most likely to create SWFs. This is because this category of state is the most likely to benefit from the insulating function of a SWF vis-à-vis the costs, political and financial, of creating one. This led to a series of testable hypotheses, which are presented below in Table 1. The task of this chapter is to motivate a series of empirical tests to evaluate these hypotheses.

My proposed hypotheses suggest two sets of empirical tests with different units of analysis. My first and second hypotheses emphasize country-level characteristics, including a state’s level of power, and its degree of vulnerability to risk. My third hypothesis emphasizes system-level risk and its likelihood of motivating states to create SWFs. For this group of hypotheses (H1-3), my unit of analysis is country-year. I motivate and present empirical tests for these hypotheses in the first section of this chapter.

My fourth hypothesis anticipates that politically secure leaders are more likely to create SWFs than insecure ones. This is due to the high short-term costs of creating a SWF against the backdrop of scarce resources and competing pressures to spend those resources in other ways. Leaders need to be positioned to survive such costs if they wish to remain in office; if they are vulnerable, I anticipate that such leaders will avoid costly decisions like creating SWFs. In moving forward with empirical tests for this argument, my unit of analysis is therefore leader-year. The second section of this chapter tests my hypotheses associated with leader security and the likelihood of creating a SWF.
In the following sections, I motivate empirical tests of my hypotheses. I discuss the operationalization of relevant variables, describe the tests I present, and provide tables of results along with a discussion of my findings.

**Vulnerable Medium Powers and SWFs**

In the previous chapter, I argued that medium powers are more likely than either small or large powers to create SWFs. This reasoning is usefully illustrated by conceiving of the decision to create a SWF in terms of a cost-benefit analysis. While all states might wish to accrue the benefits of a SWF, including especially its insulating function, for many states SWFs are simply infeasible or impractical. Small powers are likely to be more vulnerable in international markets than either medium or large powers, but by virtue of their small size, the cost of a SWF is likely to be disproportionately high. Thus, while the expected benefits might be great, given the costs of creating a SWF, this category of states may be more likely to choose alternate means to protect themselves from risks that arise from international cooperation.
Conversely, the cost of a SWF for large powers is relatively small. It is not unreasonable to assume that this group of states could create a SWF with relative ease. However, the expected benefits of a SWF for this group of states might be comparatively small. While these states are just as likely to be vulnerable to external risk, by virtue of being great powers they have less to fear from such risks. As such, they are similarly likely to forego the costs of creating a SWF, given that the expected benefits relative to those costs are comparatively low.

If states indeed create SWFs as insurance against external risk, this reasoning leaves medium powers as the candidates most likely to create them. This is because these states occupy a ‘sweet-spot’ in the cost-benefit calculus; the costs of establishing a SWF are lower relative to small powers, and are therefore not prohibitive. The expected benefits of having a SWF are simultaneously sufficient to justify those costs. Medium powers may be more secure than small ones, but they are certainly susceptible to risk, and they are especially vulnerable relative to great powers. Medium powers are neither too poor to establish a SWF, nor too powerful not to benefit from one. This reasoning leads me to hypothesize that this group of states should be the most likely to create SWFs.

While I expect that medium powers will be the states most likely to create SWFs, there are certainly those who stand to accrue fewer benefits. After all, if SWFs are a type of insurance, states must be vulnerable to risk before that insurance becomes worthwhile. Based on this, I expect that among medium powers, those that are more vulnerable to external risk are more likely to create SWFs than those that are less vulnerable. The remainder of this section is devoted to testing these hypotheses.

Operationalizing ‘Power’

Power is a ubiquitous concept in international relations, and it has been operationalized in numerous ways. For the sake of testing my medium-power hypothesis, a discussion of the concept as it relates to SWFs, along with a justification for my operationalization, is therefore warranted. My
argument about the types of states that are the most likely to create SWFs conceives of power along two interrelated dimensions. The first is state wealth, and the second is a state’s ability to tolerate or otherwise address external risk. I discuss each conception in turn, and then justify my choice of operationalization.

Power conceived of as a state’s wealth emerges from my contention that certain states simply cannot afford to direct finite resources to a SWF. Considering the size of many SWFs as an indicator, the cost of capitalizing one is a nontrivial consideration for governments; the Norwegian and United Arab Emirates’ SWFs, for example, are worth nearly USD $1 trillion each. This makes them larger in size than the entire economies of hundreds of countries, as measured by GDP. Even moderately sized SWFs are expensive institutions, thus placing them out of reach for states without the wealth to create them. In this sense, it is useful to think of the most powerful states as controlling enough wealth to establish a SWF with relative ease, while the least powerful states would find the costs extraordinary, if not completely prohibitive.

The second, and related, dimension of power captures a state’s overall ability to address the various risks that arise from international cooperation. This broad conception of power can manifest in many forms. Some states are powerful enough to absorb even the largest external shocks with minimal consequence. For example, states with large and diverse economies may be less sensitive to commodity price changes than states with smaller economies that export one or few products. The more powerful group can simply absorb the shock with few enduring consequences. These states may also be able to deflect or offset such shocks entirely. For example, powerful states can counteract unfavorable pressures on the value of their currencies by intervening in international markets, should they choose to do so.

In contrast to this group, weaker states might be devastated by even small or moderate external shocks. If a trade partner defects from an agreement, the consequences for this group may
be dire, particularly relative to more powerful states. On this metric, this group of states would be relatively weak, given their diminished ability to address external risk. This conception of power is useful for thinking about the benefits a state might accrue from a SWF. If states with more power are better able to tolerate external risk, it stands to reason that they may benefit less from having a SWF, since they lack the need for its insulating functions in the same ways that weaker states would.

Existing works in political economy have relied on similar conceptions of power. Katzenstein (1985) compares ‘small’ states such as Sweden, Norway, Denmark, and the Netherlands, to ‘large’ states, including the United States, Germany, and Japan. He evaluates these groups in terms of their distinctive abilities to respond to global market forces, noting that their political responses to international shifts are largely shaped by their power. As with this logic, I similarly contend that power underlies the decision-making processes associated with creating, or not creating, a.

Given these interrelated dimensions, I opt to operationalize power as the size of a state’s economy, as measured by its GDP. This measure usefully encompasses each dimension of power presented in my theory, and is therefore ideal for empirical analysis. First, economic size captures a state’s wealth potential based on the logic that larger economies tend to provide governments with more wealth than smaller ones. While there are alternate measures that may similarly capture a state’s wealth – GDP per capita, for example – economic size is largely preferable because it simultaneously encompasses a state’s ability to tolerate or otherwise confront external risk. It is reasonable to assume that states with larger economies are better positioned to address external risk relative to states with smaller ones.

Operationalizing power as the size of a state’s economy usefully encompasses both dimensions of power underlying my argument about why states create SWFs. The most powerful states, here those with the largest economies, possess both the wealth to create a SWF, and the ability to address external economic risk with relative ease. Conversely, states with the smallest
economies are less likely to possess the wealth requisite to create a SWF, and they simultaneously face a diminished ability to address external risk in a robust way by virtue of their small size. Countries with mid-sized economies likely possess the resources necessary to create a SWF, but remain less powerful vis-à-vis great powers in terms of their ability to address external risk, and thus remain a relatively vulnerable group of states.

**Empirical Tests for Medium Power and Systemic Vulnerability Hypotheses**

I begin my empirical tests by employing event history analysis. This assumes that all states are ‘at risk’ of creating a SWF at a given time, subject to their relative power position and degree of vulnerability, in addition to other relevant covariates. Specifically, I utilize a Cox proportional hazards model, which has the well-known advantage of permitting analysts to forego assumptions about the nature of the baseline hazard rate (Box-Steffensmeier and Jones 2004, 88). Analysts are therefore not forced to choose among parametric distributions, and thereby risk an incorrect choice, when specifying a model.

The issue of unobserved unit heterogeneity is worth noting given its prevalence in event history analysis (Box-Steffensmeier and Jones 2004). This problem can result both in biased parameter estimates and incorrect standard errors. Of course, it is well established that the standard logit model is a special case of the Cox model, and that when analysts account for time dependence in the former, it yields estimates consistent with the latter (Beck, Katz, and Tucker 1998; Box-Steffensmeier and Jones 2004). Utilizing a standard logit model also allows analysts to employ readily implemented strategies for addressing unit heterogeneity. For robustness, I therefore replicate my Cox models with a conditional logit model in order to incorporate some of these techniques.

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14 There is debate over whether the Cox PH model is appropriate for discrete-time processes in addition to continuous ones. Here I follow Box-Steffensmeier and Jones (2004, 88) who take no issue with this approach.
To test my hypothesis that medium powers are more likely than either small or large ones to create SWFs, I create a variable capturing the size of a country’s economy as measured by its gross domestic product ($GDP$). I construct this variable for all countries from 1950 to 2012. This time period is the longest used in an analysis of SWFs to date; it incorporates all 48 SWFs established between 1953, the first, and 2012.\footnote{By comparison, Chwieroth’s (2014) analysis includes only 14 SWFs from the period 1980 to 2008.} I build this variable using data available from the World Bank’s WDI database. I fill in missing values in the series using GDP data available from the Penn World Tables project. I then interpolate values where they remain missing, and are interior to the series. Last, I convert the values from constant to current USD using a deflator available from the US Department of Commerce’s Bureau of Economic Analysis. Because my hypothesis suggests a parabolic relationship between power and the likelihood of creating a SWF, I also create a squared transformation of this variable, $GDP^2$.

I also create a number of relevant control variables (CVs) for my analysis. First, I include a set of region dummy variables. These are designed to account for Chwieroth’s (2014) argument that leaders create SWFs in a process of policy mimesis, wherein SWFs diffuse through groups of countries by virtue of their physical proximity. To account for this explanation, I identify ten regions and include corresponding dummy variables. Because this essentially produces nine sets of additional parameter estimates for each model, and because the corresponding results are of little substantive interest for testing my hypotheses, I omit the estimates for these variables.

To account for the possible links between autocratic regimes and SWFs, I also include the Polity IV measure of a state’s political regime type (Marshall and Gurr 2013). In Chapter 2, I demonstrated that SWFs are roughly equally distributed across countries by regime type; as such, I expect to find no significant relationship between political regime type, autocratic or otherwise, and
the likelihood of a state creating a SWF. To the extent that I find no relationship, this further corroborates my contention that SWFs are not merely an institution for rich non-democracies.

My third CV measures each state’s population on a yearly basis. I construct this variable for the duration of the series using data available from both the World Bank’s WDI database and the Penn World Tables project. This covariate is important to include along side my key IVs measuring economic size. While it is likely true that a large economy is more likely to provide more wealth for governments than a small one, on a per capita basis even states with the largest economies may be relatively poor next to those with significantly smaller economies. Indeed, in his discussion of state power, Katzenstein acknowledges the United States, Japan, and the United Kingdom as large industrial powers by virtue of their economic size, but also notes that Switzerland, Sweden, Norway, and Denmark are wealthier on a per capita basis (1985, 18).

Given the popular association between oil-rich states and SWFs, I also include a variable measuring proven oil reserves for each country-year observation in the dataset. I construct this variable using replication data available from Haber and Menaldo (2011), and lengthen the series to 2012 using data available from the United States Energy Information Administration, as well as British Petroleum. I include this CV because oil and other natural resource revenues have been long associated with SWFs, and I have positioned such revenues as one source of the capital necessary to establish one.

In addition to proven oil reserves, I include other variables meant to capture other possible sources of revenue states can use to capitalize a SWF. First, I include a measure of each state’s per capita natural resource income. This includes income derived from the sale of state oil and natural gas, as well as revenues from non-fuel minerals and metals. These revenues can similarly provide capital for establishing a SWF. As such, this variable provides a useful complement to the oil reserves variable. To create the natural resource income variable, I use replication data available from
Haber and Menaldo (2011), and lengthen the series to 2012 using multiple imputation (Honaker and King 2010). The imputed values are estimated using cross-sectional and temporal trends in proven oil reserves and oil exports, in addition to incorporating previously observed values for natural resource income for each country-year. I perform the imputation procedure using the Amelia II software package for R (Honaker, King, and Blackwell 2012).

My third variable designed to capture possible sources of capital for a SWF is a measure of each state's annual trade surplus. I create this variable using import and export trade data available from the IMF Direction of Trade Statistics database. To calculate this measure, I subtract each state's annual imports from its exports to arrive at its yearly trade surplus. This value can, of course, be negative or positive, where larger positive values indicate a positive trade surplus. I then convert these values from current to constant USD using the deflator available from the US Bureau of Economic Analysis. To the extent that positive trade surpluses can provide excess capital for states, I would expect larger surpluses to be associated with a higher likelihood of creating SWFs.

I create a set of additional variables to test my hypothesis about systemic risk and the likelihood of states creating SWFs. This hypothesis represents a particularly difficult test for my argument. During periods of financial crisis and recession, systemic risk is particularly acute. Under such conditions, government receipts tend to decline as pressures to spend increase. In this environment, it seems unlikely that a government would allocate even scarcer public funds to creating a SWF. However, if SWFs are indeed a financial institution capable of insulating states against external risk, these periods might be associated with an increased likelihood of states creating them.

I test these hypotheses using two recent financial crises: the Asian Financial Crisis (AFC) of 1997, and the Global Financial Crisis (GFC) lasting from 2007-8. To determine whether these crises were associated with an increased likelihood of states creating SWFs, I create a series of dummy
variables that activate in the years following the crisis. For the Asian Financial Crisis, I create
dummies that activate for Thailand, Malaysia, Singapore, Indonesia, the Philippines, and South
Korea for years 1998, 1999, and 2000. For the Global Financial Crisis, I create dummy variables that
activate for all countries for years 2009, 2010, and 2011. Notably, neither a Cox proportional hazards
model nor a discrete-time conditional logit model can estimate the effects of these variables on the
likelihood of creating a SWF. I therefore estimate a separate model to test these hypotheses.

To test my medium-power hypothesis, I begin by specifying a Cox proportional hazards
model including each of the aforementioned variables. The primary IVs are GDP and \( GDP^2 \). If
there exists a parabolic relationship between power and the likelihood of creating a SWF, I expect to
observe a positive and significant coefficient on the first term, and a negative and significant
coefficient on its squared transformation. To address the issue of unit heterogeneity, I then specify a
discrete-time event history logit model including country random effects.\(^{16}\) The Cox proportional
hazards model and the logit model are presented in Table 2 as Models 1 and 2, respectively.

To test the relationship between systemic risk and the likelihood of creating a SWF, I specify
a logit model including each variable from Models 1 and 2, in addition the dummy variables for the
AFC and the GFC. Specifically, \( AFC+1 \) is a dummy for the first year following the end of that
financial crisis for all countries involved. The variable \( AFC+2 \) is a dummy for the second year
following the AFC, and so forth. I use a similar scheme for the GFC, where \( GFC+1 \) activates for
all countries for the first year following the end of the global financial crisis, and so on. These
estimates are presented in Model 3 in Table 2.

Model 3 breaks with its two predecessors in that it is not a discrete-time event history model.
Because the requisite year fixed effects are collinear with my AFC and GFC variables, I cannot
obtain parameter estimates for them. To address time dependence in the re-specified model, I fit it

\(^{16}\) Due to right censoring, I privilege the use of random effects over fixed effects, as inclusion of the latter result in
substantial loss of data and statistical power.
Table 2: Explaining the Creation of Sovereign Wealth Funds, 1950-2012

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cox PH</td>
<td>Logit (Discrete-time)</td>
<td>Logit (Splines)</td>
</tr>
<tr>
<td>Economic Power</td>
<td>0.197**</td>
<td>0.439**</td>
<td>0.140**</td>
</tr>
<tr>
<td></td>
<td>(0.071)</td>
<td>(0.135)</td>
<td>(0.031)</td>
</tr>
<tr>
<td>Economic Power^2</td>
<td>-0.434**</td>
<td>-0.994**</td>
<td>-0.226**</td>
</tr>
<tr>
<td></td>
<td>(0.204)</td>
<td>(0.383)</td>
<td>(0.070)</td>
</tr>
<tr>
<td>Democracy</td>
<td>-0.112</td>
<td>-0.192</td>
<td>0.040</td>
</tr>
<tr>
<td></td>
<td>(0.248)</td>
<td>(0.501)</td>
<td>(0.115)</td>
</tr>
<tr>
<td>Population (log)</td>
<td>-0.304**</td>
<td>-0.577**</td>
<td>0.440**</td>
</tr>
<tr>
<td></td>
<td>(0.114)</td>
<td>(0.217)</td>
<td>(0.059)</td>
</tr>
<tr>
<td>Resource Income PC</td>
<td>0.106</td>
<td>0.279</td>
<td>0.227**</td>
</tr>
<tr>
<td></td>
<td>(0.168)</td>
<td>(0.335)</td>
<td>(0.056)</td>
</tr>
<tr>
<td>Trade Surplus</td>
<td>0.434</td>
<td>0.102*</td>
<td>0.375**</td>
</tr>
<tr>
<td></td>
<td>(0.379)</td>
<td>(0.057)</td>
<td>(0.138)</td>
</tr>
<tr>
<td>Oil Reserves</td>
<td>0.060</td>
<td>0.177</td>
<td>0.642**</td>
</tr>
<tr>
<td></td>
<td>(0.303)</td>
<td>(0.566)</td>
<td>(0.190)</td>
</tr>
<tr>
<td>GFC+1</td>
<td>.</td>
<td>.</td>
<td>0.519**</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>(0.106)</td>
</tr>
<tr>
<td>GFC+2</td>
<td>.</td>
<td>.</td>
<td>0.463**</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>(0.125)</td>
</tr>
<tr>
<td>GFC+3</td>
<td>.</td>
<td>.</td>
<td>0.501**</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>(0.125)</td>
</tr>
<tr>
<td>AFC+1</td>
<td>.</td>
<td>.</td>
<td>0.033</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>(0.204)</td>
</tr>
<tr>
<td>AFC+2</td>
<td>.</td>
<td>.</td>
<td>0.052</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>(0.162)</td>
</tr>
<tr>
<td>AFC+3</td>
<td>.</td>
<td>.</td>
<td>0.143</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>(0.289)</td>
</tr>
<tr>
<td>Region (10x)</td>
<td>(not reported)</td>
<td>(not reported)</td>
<td>(not reported)</td>
</tr>
<tr>
<td>Splines (1-3)</td>
<td>.</td>
<td>.</td>
<td>(not reported)</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

Cell entries are coefficients with standard errors in parentheses. Positive (negative) coefficients on the Cox PH model indicate that countries are more (less) likely to ‘fail’ by creating a SWF; estimates for region dummies and cubic splines are omitted due to space constraints; statistical significance: * p ≤ .10; ** p ≤ .05; two-tailed tests.
with three cubic splines following Beck, Katz, and Tucker (1998). I also include country random effects to address unit heterogeneity. Due to space constraints, I do not report the coefficient estimates for the splines or any of the fixed effects for the models presented in Table 2.

**Discussion**

There appears to be strong support for my hypothesis that medium powers are more likely to create SWFs than either small or large ones, and the results are consistent across the three models presented in Table 2. Model 1 reveals that medium powers experience a significantly higher risk of failure than either small or large powers. Model 2 corroborates these findings, suggesting that the likelihood of observing a medium power creating a SWF is significantly higher than the likelihood of observing either a small or large power doing the same. The consistent results across all three models suggest a robust relationship between being a medium power and the likelihood of creating a SWF.

Figure 1 is instructive for illustrating this relationship; it presents the predicted probabilities of states creating a SWF at different levels of economic power using estimates generated from Model 2. The figure demonstrates a parabolic relationship between a state’s level of economic power and its likelihood of creating a SWF; both large and small economies are substantially less likely to create a SWF than medium ones. The downward inflection point in this relationship appears to be roughly at the $750 billion mark, suggesting that as economies surpass this point in economic size, they grow consistently less likely to create a SWF.

Notably, a state’s oil reserves appear to bear no significant relationship to its likelihood of creating a SWF. The lack of any significant result here may be due to the inclusion of additional variables designed to capture the multitude of sources of capital that states can use to establish SWFs. Neither does there appear to be a significant relationship between a state’s per capita natural
Figure 1: The probability of states creating a SWF at levels of economic power

resource income and its likelihood of creating a SWF. The inconsistent results here likely corroborate my contention that some source of capital is a necessary, but not sufficient, condition for establishing a SWF. Many SWFs are established with capital derived from natural resources, but a number receive no funds from such sources. Similarly, some SWFs are capitalized with foreign exchange reserves, or other excess capital arising from trade surpluses, yet others are not.

It is worth mentioning that there appears to be a positive association between the variables designed to capture sources of capital and the likelihood of creating a SWF when I move to a standard time-series conditional logistic regression (Model 3). Whereas Models 1 and 2 estimate the hazard or log-odds, respectively of creating a SWF at time \( t \) as a function of the model’s covariates, Model 3 evaluates the association between the likelihood of creating and maintaining a SWF over time as a function of those covariates. In Models 1 and 2, countries exit the dataset after failure (i.e., SWF creation), whereas Model 3 allows for the possibility of a SWF to endure indefinitely, or to be dismantled, by a controlling state. This distinction likely accounts for the different results; indeed, over time, there does appear to be a positive and significant relationship between a state’s natural
resource income, its proven oil reserves, and its trade surplus with regard to its likelihood of having a SWF.

More important in this model are the variables seeking to capture systemic risk. Notably, the first, second, and third years following the end of the global financial crisis are all signed positively and are significant, suggesting that these years are associated with an increased likelihood of states creating SWFs, when compared to other years. Against the backdrop of the GFC and its ensuing recession, this may seem extraordinary. After all, the GFC left states scrambling to shore up budgets amidst declining tax revenue while addressing a host of other domestic political and economic problems. That the years of the ensuing recession are associated with an increased likelihood of states creating SWFs is notable, given this environment. This represents a difficult test, and it indeed appears to corroborate my argument that states create SWFs as a type of insurance against the types of external risks that existed abundantly during the GFC.

The years following the AFC do not appear to be associated with an increased likelihood of affected states creating SWFs. While the states involved with the Asian financial crisis did not appear more likely to create SWFs in any of the three years following the crisis, it is worth noting that both South Korea and Indonesia did eventually create SWFs. Malaysia and Singapore, both profoundly affected by the crisis, already had operational SWFs at the time of the AFC. In fact, as of 2012, four of the six countries most affected by the AFC have SWFs.

Considering the inconsistent results in Model 3, I am reluctant to reject the null hypothesis that periods of higher systemic risk increase the likelihood of states creating SWFs. However, given the strong results suggesting an increased likelihood of observing SWF creation in the years following the GFC, and given that four of the six states most affected by the AFC have created SWFs, I am sanguine about my argument that crises can increase the likelihood of states creating
SWFs, especially to the extent that they can help insulate states against the sorts of risks they experience in the midst of such crises.

Empirical Tests for Relative Vulnerability Hypotheses

I now turn to my hypothesis that among medium powers, those that are more vulnerable are more likely to create SWFs than those that are less vulnerable. This emerges from the logic that while medium powers may be the most likely to create SWFs relative to small or large powers, not all medium powers are equally vulnerable in the face of external risk. Not all states in this group therefore stand to benefit equally from having a SWF.

I operationalize a state’s relative vulnerability as both the degree of openness of its capital markets, and its level of trade openness. In each case, more openness renders states more vulnerable in global markets relative to their counterparts with less openness. To build the variable measuring capital account openness, I rely on the de jure index created and maintained by Chinn and Ito (2008). The index is based on state reports of different restrictions on their capital accounts. It is normalized between zero and one, where higher values indicate higher levels of capital account openness, and thus more vulnerability.

Given the widely known enduring debates over the best ways to measure trade openness (i.e., David 2007), I operationalize this variable using three common approaches. The first approach measures openness as a ratio of trade to the size of a state’s economy, calculated as \( \frac{\text{Exports + Imports}}{\text{GDP}} \). Here, higher values indicate greater openness to trade, and thus more vulnerability. One notable advantage of this widely used approach is that data are widely available. To construct this variable, I use trade data available from the IMF Direction of Trade statistics database, and I obtain GDP data from both the World Bank and the Penn World Tables project.
The second approach measures trade openness as each state’s annual \textit{trade-weighted average tariff} rate. This captures the \textit{de facto} average level of tariff protection for each state, where higher values indicate more protection, and thus less exposure and less vulnerability. Lower values indicate lower average tariff protection, suggesting higher levels of trade openness and thus more exposure and vulnerability. These data are available from the World Bank’s Trade Analysis and Information System (TRAiNS) database.

My third, and related, measure of trade openness is a composite index incorporating both a state’s trade-weighted average tariff rate and a variety of observed \textit{non-tariff barriers} (NTBs). These include quantity, price, regulatory, investment, and customs restrictions, in addition to measures such as government subsidies and aid. These data are available from the Heritage Foundation. The composite index, titled ‘trade freedom,’ is scaled such that higher values indicate fewer restrictions on trade, and thus more exposure and higher levels of vulnerability. Conversely, lower scores indicate more restrictions, and thus higher levels of protection.

To test my vulnerable medium-power hypothesis, I then create a series of variables that correspond with each country’s relative economic size in a given year. Specifically, I create five dummy variables, and assign each country to one based on the size of its economy relative to others. This effectively separates all countries into quintile bins for all years, and all countries are assigned to a bin based on their economic position relative to other states. This approach thus usefully encompasses states’ relative power position in the international system over time. As countries’ economies grow (or contract) over time, they can move into a different bin corresponding with their new relative economic size.

The \textit{first quintile} bin is a dichotomous indicator that turns on for countries whose economic size ranks them in the lowest 20 percent of countries. The \textit{second quintile} bin marks countries in the second highest 20 percent bracket by economic size, and so forth. By dividing each
country into quintiles by economic size, I effectively locate the smallest and largest powers in the first and fifth quintiles, while lower-medium, medium, and upper-medium powers fall into the second, third and fourth quintiles, respectively.

After separating each country by quintile for each year, I re-specify the full models presented in Table 2 to include each measure of relative vulnerability, and then interact that measure with each of the five dichotomous quintile indicators. This effectively allows me to estimate the marginal effects of vulnerability on the likelihood of creating a SWF for each category of state by quintile. I estimate a single model for each of the four indicators of vulnerability. Model 1 takes as its measure of vulnerability capital openness. Model 2 uses the trade ratio measure of trade openness, while Models 3 and 4 use the trade-weighted average tariff and the average tariff + NTB composite index, respectively. While each of the four models includes all covariates from Models 1 and 2 from Table 2, I do not report their respective parameter estimates due to space constraints.

For the sake of interpretability, for each of the four models, I plot the marginal effects of its respective measure of vulnerability on the likelihood of creating a SWF for all categories of states. This allows for the useful comparison of the marginal effects of relative vulnerability across each bin of state. Indeed, I expect that relatively vulnerable medium powers will be more likely to create SWFs. It follows that I expect relative vulnerability to have no effect on the likelihood of SWF creation among small or great powers. The marginal effects plots allow for an easy visualization of these effects, and are therefore essential for testing my medium-power hypothesis. The marginal effects of capital openness on the likelihood of states creating SWF are plotted as Figures 1. The marginal effects of trade openness, as measured by a trade to GDP ratio, are plotted as Figures 2. The marginal effects of trade openness using my other two measures of trade openness, average weighted tariffs and weighted tariffs plus NTBs, are plotted as Figures 3 and Figures 4, respectively.
Discussion

I find support for my hypotheses that relatively vulnerable medium powers are more likely to create SWFs than invulnerable ones. These results are reasonably consistent across each of the four measures of vulnerability that I employ. Because the parameter estimates reported in Table 3 are not readily interpretable in ways that address my hypothesis, I estimate the marginal effects of each measure of vulnerability on a state’s likelihood of creating a SWF by economic size. I plot these marginal effects in Figures 1 through 4. Each set of figures contains five marginal effects plots corresponding to each state’s economic quintile, where states in the first quintile are the least powerful, while states in the fifth are the most.

The results presented in Figures 1 support my theory that relative vulnerability underlies states’ decisions to create SWFs. I have already shown that medium powers are the states most likely to create SWFs. As such, I expect there to be no marginal effect of capital openness at any level on the likelihood of small or large powers to create SWFs; this, after all, would be inconsistent with my earlier contention that these types of states are unlikely to create SWFs a priori. The results are consistent with this argument. There appears to be no significant marginal effect of capital openness on the likelihood of creating a SWF for states that fall into the bins denoting first and second quintile economic powers.

This pattern begins to reverse for states in the third quintile category – indeed, as this group of states grows more vulnerable, the likelihood of creating a SWF increases; the marginal effects are significant for a group of states with the most open capital markets. This trend becomes even more pronounced for states in the fourth economic quintile. As this group grows more vulnerable, they are significantly more likely to create SWFs, as the slope of the probability curve suggests. Notably, these effects reverse sharply for the most powerful states in the sample; indeed, it appears that the degree of capital openness for this group has either no effect on its likelihood of creating a SWF, or
Table 3: Medium Power Vulnerability and the Creation of SWFs

<table>
<thead>
<tr>
<th>Model 1 (Capital Openness)</th>
<th>Model 2 (Trade Ratio)</th>
<th>Model 3 (Avg Tariff)</th>
<th>Model 4 (Avg Tariff + NTBs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capital Openness</td>
<td>-0.687**</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>(0.142)</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Trade Openness</td>
<td>.</td>
<td>0.278**</td>
<td>0.694</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>(0.048)</td>
<td>(0.441)</td>
</tr>
<tr>
<td>2nd Quintile Economic Size</td>
<td>0.239**</td>
<td>0.219</td>
<td>0.096</td>
</tr>
<tr>
<td></td>
<td>(0.106)</td>
<td>(0.189)</td>
<td>(0.171)</td>
</tr>
<tr>
<td>3rd Quintile Economic Size</td>
<td>0.216**</td>
<td>0.087</td>
<td>0.008</td>
</tr>
<tr>
<td></td>
<td>(0.115)</td>
<td>(0.219)</td>
<td>(0.216)</td>
</tr>
<tr>
<td>4th Quintile Economic Size</td>
<td>0.301**</td>
<td>0.429**</td>
<td>0.358**</td>
</tr>
<tr>
<td></td>
<td>(0.103)</td>
<td>(0.153)</td>
<td>(0.128)</td>
</tr>
<tr>
<td>5th Quintile Economic Size</td>
<td>0.219*</td>
<td>0.121</td>
<td>0.147</td>
</tr>
<tr>
<td></td>
<td>(0.129)</td>
<td>(0.175)</td>
<td>(0.173)</td>
</tr>
<tr>
<td>2nd Quintile Econ Size X Capital Openness</td>
<td>0.739**</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>(0.326)</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>3rd Quintile Econ Size X Capital Openness</td>
<td>0.107**</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>(0.034)</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>4th Quintile Econ Size X Capital Openness</td>
<td>0.109**</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>(0.031)</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>5th Quintile Econ Size X Capital Openness</td>
<td>0.452*</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>(0.267)</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>2nd Quintile Econ Size X Trade Openness</td>
<td>.</td>
<td>-0.106</td>
<td>0.045</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>(0.101)</td>
<td>(0.114)</td>
</tr>
<tr>
<td>3rd Quintile Econ Size X Trade Openness</td>
<td>.</td>
<td>-0.258</td>
<td>-0.054</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>(0.763)</td>
<td>(0.320)</td>
</tr>
<tr>
<td>4th Quintile Econ Size X Trade Openness</td>
<td>.</td>
<td>-0.243**</td>
<td>-0.014</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>(0.089)</td>
<td>(0.907)</td>
</tr>
<tr>
<td>5th Quintile Econ Size X Trade Openness</td>
<td>.</td>
<td>0.015</td>
<td>-0.038</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>(0.138)</td>
<td>(0.776)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.321</td>
<td>-0.121**</td>
<td>-0.024</td>
</tr>
<tr>
<td></td>
<td>(0.309)</td>
<td>(0.034)</td>
<td>(0.635)</td>
</tr>
</tbody>
</table>

Error Cluster  
Country Region  
Fixed Effects  
Country Region  
R-Squared  
0.17  
SWFs  
29  
Countries  
138  
N  
3,538

Cell entries are coefficients with standard errors in parentheses; estimates for fixed effects are omitted due to space constraints; statistical significance: * p ≤ .10; ** p ≤ .05; two-tailed tests.
Figures 1: Marginal Effects of Capital Openness on SWF Creation by Economic Size
(Invulnerable $\rightarrow$ Vulnerable)
Figures 2: Marginal Effects of Trade Openness (Trade Ratio) on SWF Creation by Economic Size (Invulnerable → Vulnerable)
Figures 3: Marginal Effects of Trade Openness (Average Weighted Tariff) on SWF Creation by Economic Size (Vulnerable → Invulnerable)
Figures 4: Marginal Effects of Trade Openness (Tariffs + NTB) on SWF Creation by Economic Size (Invulnerable → Vulnerable)
has *the opposite* effect. The probability curve shows a decreasing likelihood of creating a SWF as this group of states grow more vulnerable.

The plots showing the marginal effects of trade openness on the likelihood of a state creating a SWF reveal similar trends. A state's degree of trade exposure, as measured by a ratio of imports and exports to economic size, has no significant effect on the likelihood of that state creating a SWF for those that fall in the first and fifth quintile economic bins. This is unsurprising. The marginal effects of vulnerability are only significant for states falling into the third and fourth quintile bins. Indeed, the plot for the third quintile of economic powers—those whose size places them between the 40th and 60th percentiles—shows a sharp increase in the probability of creating a SWF as vulnerability increases relative to states that are invulnerable.

The marginal effects plots associated with the other two measures of trade openness broadly corroborate these trends. Specifically, the plots reported under *Figures 3*, which show the marginal effects of states’ average weighted tariff levels on the likelihood of creating a SWF, reveal a significant relationship only for states falling in the fourth quintile. Here, as expected, the most vulnerable states—in this case, those with the lowest levels of average tariffs—are more likely to create SWFs than both their less vulnerable medium-power peers, and states that are either small or large powers. This pattern again emerges in the plots reported under *Figures 4*, which show the effects of a composite index comprised of weighted average tariffs and observed tariffs, on the likelihood of a state creating a SWF. Here, too, the effects are only significant for vulnerable states in the fourth quintile bin. This measure of vulnerability has no significant effect on the likelihood of either weak or strong states creating SWFs, thus supporting my hypothesis.
Political Security and SWFs

In the previous chapter, I hypothesized that politically secure leaders are more likely to create SWFs than politically insecure ones. This is because there are nontrivial costs to directing finite public resources to a SWF rather than allocating them to other priorities, which may be more politically beneficial for certain leaders. While all political leaders may wish to have a SWF to insulate their governments and publics from external risk, the costs are likely to outweigh any anticipated benefits for many. On the presumption that all leaders wish to retain office, it is not unreasonable to assume that insecure leaders may prefer to forego the costly decision to create a SWF where such a decision would be politically detrimental, and could even lead to removal from office. In the following section, I motivate tests for evaluating my hypothesis that more secure leaders are more likely to create SWFs than less secure ones.

Operationalizing Leadership Security

There are certain challenges in operationalizing the degree of job security a leader enjoys in her or his office. There is wide variation not only in political regime type, but also in the respective government institutions within regimes across countries that influence a given leader’s level of security. Some autocrats are entrenched in stable regimes that permit them security for life, for example, while others are quite unstable despite never facing competitive elections. Certain democrats are bound by formal limits on their ability to remain in office, while others can retain their positions indefinitely, provided they continue to emerge victorious at the ballot box. Operationalizing the job security of a leader in a way that lends itself to cross-contextual analysis thus requires careful consideration.

In light of these concerns, I operationalize leadership security by creating two variables, tenure and days in office, which I discuss in turn. I construct these variables for all leaders for all
countries from 1950 to 2004 relying on data available from the Archigos project (Goemans, Gleditsch, and Chiozza 2009). The first variable, tenure, is a count of the number of days each leader served in office from entry to exit. For example, US Presidents Ronald Reagan and Bill Clinton each served eight-year terms of office, and as such are coded with a tenure value of 2,920 days. Reagan and Clinton receive this value for their corresponding leader-year observations for as long as they remain in the dataset.

This variable captures an important dimension of leadership security that is useful for testing my hypotheses. Leaders with higher values clearly enjoyed longer terms of office than those with smaller values. We may therefore reasonably infer that those with larger values experienced higher average levels of security in office than did their peers with lower values; after all, a highly insecure leader is unlikely to have served a lengthy term of office before removal, relative to his or her more secure counterparts. This measure thus aims to represent a comparable snapshot of all leaders’ degree of security vis-à-vis other leaders.

This operationalization also incorporates leaders’ prospective expectations about their ability to retain office. This is an important dimension for thinking about the decision-making process surrounding the creation of a SWF. Before implementing policies, and especially controversial ones, leaders no doubt look to the future to evaluate the probable impact of those policies on their security in office. Larger values here thus not only represent the total time served in office (a comparable representation of each individual’s level of leadership security), they also incorporate a leader’s expectations about his or her ability to retain office on an ongoing basis. A leader who looks ahead and sees a stable future may be more likely to create a SWF than one who looks forward to more doubt.

\[17\] I am unable to lengthen this series beyond 2004 due to data constraints in Archigos.
To illustrate, Singapore’s President Lee Kuan Yew served in office from 1959 to 1990, resulting in a tenure lasting 11,499 days. He created Singapore’s SWF in 1974, after having served roughly 5,840 days in office. At the time of creation, it is reasonable to assume that Lee felt secure enough to tolerate any political or other costs of directing public funds into a SWF. Lee no doubt anticipated retaining office well beyond 1974, and as a result was well positioned to absorb any consequences of creating a SWF. This value usefully encompasses both Lee’s *de facto* level of security at the time he created Singapore’s SWF, and his prospective assessment of his future ability to retain office after he created it.

The second variable, *days in office*, is a rolling count of the number of days a leader serves in office until he or she leaves. The count begins on the first day a leader enters office in a given year, and each yearly observation thereafter reflects the rolling sum of days that leader serves until he or she exits. For example, US President Jimmy Carter served his first full day in office on 21 January 1977. During that year, he therefore served 344 days in office, and as such is coded with that value. The observation for 1978 includes 365 days for that year served in addition to the 344 days for the previous year, reflecting that Carter had served 709 days in office by the end of 1978. I continue this coding scheme for all leaders in my sample until they exit office.

This variable is an alternative way of operationalizing leadership security. Because this measure is not constant for all leader-years in the dataset, it is able to incorporate the timing of creation of a SWF in a different, though equally useful, way. If a leader creates a SWF in his or her first year of office, the value of the observation is much smaller (no more than 365) than if he or she created a SWF in the tenth year in office. This measure may therefore represent a more difficult test for my hypothesis, in particular in instances where leaders create SWFs early in their terms of office, and fail to retain office for much longer due to the associated consequences.
Empirical Tests for Leadership Security

To begin my empirical tests, I utilize the tenure variable and perform a difference-in-means test comparing the tenure of leaders who created SWFs to those who did not. There were 1,828 leaders who served in office during the period 1950 to 2004. During that time, 36 of those leaders created SWFs. Table 4 reports the results of a difference-in-means test comparing the total tenure of leaders who created SWFs to those who did not.

The results in Table 4 show a sizeable and statistically significant difference between the tenures of leaders who create SWFs and those who do not. Among leaders who created SWFs, the average term of office was 5,605 days, or roughly 15 years. The mean tenure for leaders who never created a SWF was significantly lower (p<0.01), at 1,720 days, or roughly 4.5 years. This may indeed suggest that leaders with higher levels of security, as measured by the length of their terms of office, are more likely to create SWFs.

Table 4: Difference-in-means Tests in Tenure for Leaders who Create SWFs

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Days (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Created SWF</td>
<td>36</td>
<td>5,605 (767)</td>
</tr>
<tr>
<td>Never Created SWF</td>
<td>1,792</td>
<td>1,720 (55)</td>
</tr>
<tr>
<td>Difference p (SWF &gt; ~SWF)</td>
<td>1,828</td>
<td><strong>3,885 &gt; 99 percent</strong></td>
</tr>
</tbody>
</table>

Of course, this test does not account for leader characteristics that may be associated both with the likelihood of creating a SWF and with one’s security in office. In particular, autocrats putatively enjoy longer leadership tenures than democrats, and SWFs have at least anecdotally been associated with oil-rich dictators. If autocrats are a priori more likely to create SWFs than democrats, and if they remain in office for longer periods by virtue of being autocrats, these results may be misleading. To account for this possibility, it is therefore worthwhile to examine dictators and
democrats as distinctive groups. I therefore identify each leader as either autocrat or democrat based on the classification created by Cheibub, Gandhi, and Vreeland (2010), and then repeat the difference-in-means tests for each category of leader. The results are reported in Table 5.

Table 5: Difference-in-means Tests in Tenure for Autocrats and Democrats who Create SWFs

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean Days (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autocrats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Created SWF</td>
<td>22</td>
<td>7,684 (1,024)</td>
</tr>
<tr>
<td>Never Created SWF</td>
<td>773</td>
<td>2,368 (111)</td>
</tr>
<tr>
<td>Difference (pr) (SWF &gt; ~SWF)</td>
<td>795</td>
<td>5,316 &gt; 99 percent</td>
</tr>
<tr>
<td>Democrats</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Created SWF</td>
<td>14</td>
<td>2,337 (251)</td>
</tr>
<tr>
<td>Never Created SWF</td>
<td>1,019</td>
<td>1,229 (39)</td>
</tr>
<tr>
<td>Difference (pr) (SWF &gt; ~SWF)</td>
<td>1,033</td>
<td>1,108 &gt; 95 percent</td>
</tr>
</tbody>
</table>

The results in Table 5 corroborate the findings reported in Table 4. For each category of leader, those who created SWFs experienced significantly longer tenures. Among autocrats, those who created SWFs enjoyed an average tenure of 7,684 days, or roughly 21 years. Their counterparts who never created SWFs experienced a mean tenure of 2,368 days, or only around 6.5 years. As expected, on average democrats experience shorter tenures in office than dictators. However, there remains a statistically significant difference in the tenures of democrats who created SWFs, and those who did not. Those who created SWFs experienced mean tenures nearly twice as long, at 2,337 days or around 6.5 years, as those who did not.

These findings appear to support my argument that leaders with higher levels of security in office are more likely to create SWFs. However, before I reject the null hypothesis that leadership security has no effect on the likelihood of a leader creating a SWF, I proceed with a more complete set of tests to evaluate this hypothesis. I discuss these tests in greater detail below before reporting and discussing the results.
Given my theory that a series of relevant conditions culminate over time to increase the likelihood of a leader creating a SWF, I begin by employing event history analysis. I specify a base model for each IV to estimate a leader’s hazard of creating a SWF in a given year. The dependent variable (DV) is the same indicator I utilize in the previous difference-in-means tests; it is hand-coded dichotomous indicator of whether a leader created a SWF in a given year. I use this DV to estimate parallel sets of models for both IVs. Specifically, Models 1 and 2 use tenure as their primary IV, while Models 3 and 4 use days in office.

The base models also include other theoretically relevant covariates. First, in line with the common association between non-democracies and SWFs, I account for the political regime type within which each leader is nested. Rather than employing the Polity IV measure of political regime type as I did for the models presented in Tables 2 and 3, here I opt for the leader classification index proposed by Cheibub, Gandhi, and Vreeland (2010). This index designates all leaders as either democrat or autocrat, and subsequently identifies each autocrat as a military, civilian, or royal dictator.

I privilege the use of this index for a number of reasons. First, based on the results presented earlier, I have little expectation of observing any significant relationship between political regime type, as measured by Polity, and a state’s likelihood of creating a SWF. Including an alternate measure can thus be conceived as a robustness check on my earlier null result. Second, this classification is a more appropriate choice given my leader-year unit of analysis, as it characterizes leaders directly rather than simply measuring the regime type within which each leader is nested. Third, this measure allows me to examine the possibility of relevant variation across types of autocrats in terms of their likelihood of creating SWFs. Not all autocrats are associated with regimes that afford them the same levels of leadership security. For example, monarchs tend to be embedded in more durable regimes than either military or civilian dictators (Steinberg and Malhotra 2014). This
index therefore allows me to determine whether there exist any systematic differences across types of autocrats vis-à-vis each other, and vis-à-vis democrats, in terms of their likelihood of creating a SWF.

To this end, I employ the leader classification index first to designate all leaders as *dictator* or *democrat*. I include this dichotomous indicator to determine whether there exists any significant difference between these two broad categories of leaders in terms of their likelihood of creating a SWF. Per my earlier results, I have little expectation of observing a significant difference between democrats and dictators. Second, for all autocrats, I include an indicator of whether the individual is a *military*, *civilian*, or *royal dictator*. My theory is largely agnostic over the degree to which one type of dictator may be more likely to create a SWF than another; indeed, I have little expectation of observing any significant difference. Rather, a null result will further confirm my contention that political regime type, or the category of leader therein, is not a significant explanatory factor in understanding why some states create SWFs.

Related, given the popular association between oil-rich dictators and SWFs, I also include a variable measuring the proven *oil reserves* in the territory over which each leader presides for each of his or her yearly observations. Given that commentators have argued that SWFs are a byproduct of excessive oil wealth accrued by dictators, this remains a theoretically important variable. To construct this measure, I rely on replication data available from Haber and Menaldo (2011), and fill in missing values from other sources, including the US Energy Information Administration. I am agnostic over the significance of this variable; I have proposed that revenues derived from the sale of natural resources, and especially oil, can provide the capital necessary to establish a SWF. Thus, a positive and significant sign on this variable is not unexpected, and would not be problematic for my larger argument.
The third set of covariates I include are regional dummy variables, following Chwieroth’s (2014) argument that leaders create SWFs through a process of policy mimesis. I again identify ten regions and include corresponding dummy variables to account for the possibility that SWFs diffuse through groups of leaders who are peers by virtue of proximity. Because I include ten region dummy variables for each model, and because the corresponding results are of little substantive interest for testing my hypotheses, I again omit the parameter estimates for these variables, though they are included as potential confounders in Models 1-4.

I also include a variable capturing the size of a country’s economy for each leader-year observation, as measured by its GDP, along with a squared transformation of this term. While I present a more appropriate test of my medium-power hypothesis in the previous section along with a discussion of the choice of operationalization, including a measure of economic size here is an important control due to my expectation that leaders presiding over small or large economies are less likely to create SWFs. I create my GDP variables using data available from the World Bank, and I substitute missing observations using data from other sources, including the Penn World Table. Last, I convert these values to constant US dollars using a deflator from the US Department of Commerce’s Bureau of Economic Analysis.

Table 6 presents results for my tests of the hypothesis that more secure leaders are more likely to create SWFs. Models 1 and 2 report coefficients for the Cox proportional hazards models, along with standard errors clustered on country in parentheses. These are rescaled for the sake of consistent presentation, though this makes prima facie calculations of effect sizes difficult. These models effectively estimate the ‘risk of failure’ in a given leader-year. In the next section I provide an interpretation of the effect sizes corresponding to the reported results.

Models 2 and 4 are estimated using conditional logit, and are included for robustness, and to address the issue of unit heterogeneity. They report logit coefficients with corresponding standard
errors in parentheses. These models include leader random effects to account for unit heterogeneity. I also include year fixed effects (FE). This effectively creates a discrete-time event history model of SWF creation, which expectedly yields results similar to the Cox PH models (see Hoffmann 2004). Notably, the inclusion of year FE in the logit specification has the effect of dropping substantially the number of leaders and observations in the sample. This is of course not unexpected; observations for years in which no SWFs were created are dropped, and leaders whose tenures span such years are also dropped. Further, the dataset for these models is structured such that when a SWF is created, or observed in a given leader-year, all subsequent leaders along with his or her entire country exit the dataset.

Discussion

The results from each model for both independent variables are supportive of my hypothesis that leaders with more security are more likely to create SWFs. In each case, the coefficients for leadership security are signed positively, indicating a greater risk of ‘failure’ in the Cox PH models, or increased log-odds of a leader creating SWF in the conditional logit case. All coefficients are also significant at or beyond conventional levels, likely suggesting a robust relationship between leadership security and the likelihood of creating a SWF.

It is worth noting that substantive effects of leadership tenure on the risk of failure (i.e., creating a SWF) are somewhat small. From Model 2, for example, a five-year increase in a leader’s tenure is associated with a 0.024 percent likelihood of failure in a given year. However, the relatively small effect size should not lead analysts to discount the importance of leadership security in understanding the process surrounding the creation of a SWF. After all, it is unsurprising that the effect sizes are small; among thousands of leaders across the 54-year period in my sample, only 36 created SWFs. Given that SWFs are a rare event, one would naturally expect the substantive effects
<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Cox PH</td>
<td>Logit (Discreet Time)</td>
<td>Cox PH</td>
<td>Logit (Discreet Time)</td>
</tr>
<tr>
<td>Leadership Security Tenure</td>
<td>0.131**</td>
<td>0.312*</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td></td>
<td>(0.053)</td>
<td>(0.166)</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Leadership Security (Days Served)</td>
<td>.</td>
<td>.</td>
<td>0.133**</td>
<td>0.243**</td>
</tr>
<tr>
<td></td>
<td>.</td>
<td>.</td>
<td>(0.054)</td>
<td>(0.115)</td>
</tr>
<tr>
<td>Dictatorship (=1)</td>
<td>-0.010</td>
<td>0.063</td>
<td>0.015</td>
<td>0.730</td>
</tr>
<tr>
<td></td>
<td>(0.108)</td>
<td>(0.126)</td>
<td>(0.105)</td>
<td>(0.950)</td>
</tr>
<tr>
<td>Military Dictator</td>
<td>-0.012</td>
<td>-0.252</td>
<td>-0.92</td>
<td>-0.138</td>
</tr>
<tr>
<td></td>
<td>(0.927)</td>
<td>(0.179)</td>
<td>(0.102)</td>
<td>(0.111)</td>
</tr>
<tr>
<td>Civilian Dictator</td>
<td>0.048</td>
<td>0.013</td>
<td>0.623</td>
<td>0.110</td>
</tr>
<tr>
<td></td>
<td>(0.102)</td>
<td>(0.113)</td>
<td>(0.972)</td>
<td>(0.815)</td>
</tr>
<tr>
<td>Royal Dictator (Omitted)</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
<tr>
<td>Size of Economy</td>
<td>0.562*</td>
<td>0.150*</td>
<td>0.505</td>
<td>0.993*</td>
</tr>
<tr>
<td></td>
<td>(0.327)</td>
<td>(0.090)</td>
<td>(0.341)</td>
<td>(0.536)</td>
</tr>
<tr>
<td>Size of Economy ^2</td>
<td>-0.643*</td>
<td>-0.176</td>
<td>-0.558*</td>
<td>-0.114</td>
</tr>
<tr>
<td></td>
<td>(0.353)</td>
<td>(0.149)</td>
<td>(0.337)</td>
<td>(0.096)</td>
</tr>
<tr>
<td>Oil Reserves</td>
<td>0.144*</td>
<td>0.576**</td>
<td>0.137*</td>
<td>0.376**</td>
</tr>
<tr>
<td></td>
<td>(0.077)</td>
<td>(0.290)</td>
<td>(0.075)</td>
<td>(0.175)</td>
</tr>
<tr>
<td>Region (10x)</td>
<td>.</td>
<td>.</td>
<td>.</td>
<td>.</td>
</tr>
</tbody>
</table>

Cell entries are coefficients with standard errors in parentheses. Positive (negative) coefficients on Cox PH models indicate that leaders are more (less) likely to ‘fail’ by creating a SWF; statistical significance: * p ≤ .10; ** p ≤ .05; two-tailed tests.
to be small. Against this backdrop, I am confident in rejecting the null hypothesis that leadership security has no effect on the likelihood of a leader creating a SWF. Indeed, I have shown that leaders who do create SWFs tend to enjoy substantially and significantly higher levels of security in office than their peers who do not.

Further results from Table 3 warrant comment. In particular, there are inconsistent results for the variables measuring the size of the economy over which a leader presides in a given year. This is perhaps unsurprising given the unit of analysis for these tests, and I have tested my hypotheses over economic size more fully in the preceding section. Of note is that there appears to be a consistently significant relationship between the level of proven oil reserves and the likelihood of a leader creating a SWF. This corroborates my argument that the sale of natural resources can provide one source, among many, of revenue that governments can use to capitalize their SWFs.

Conclusion

The task of this chapter has been to motivate a series of empirical tests to evaluate the hypotheses proposed in the previous one. Below I briefly summarize these hypotheses and associated results before concluding the chapter. In the next chapter, I present a series of illustrative case studies to complement the empirical results summarized below.

**H1:** Medium powers are more likely to create SWFs than small or large powers.

I find robust support for my argument that medium powers comprise the states most likely to create SWFs. This hypothesis emerges from the logic of a cost-benefit calculation, where states need to justify the costs of a SWF, both financial and political, against the expected benefits. Whereas small powers might expect great benefits from a SWF, the costs, and especially the financial ones, are prohibitively high. Conversely, the costs of a SWF are relatively trivial for large powers, but the expected benefits are much lower such that this category of state is similarly unlikely
to create SWFs. This leaves medium powers as the states most likely to create them, and my empirical tests show robust support for this hypothesis. I am therefore confident in rejecting my null hypothesis in light of results demonstrating that SWFs are overwhelmingly a medium power institution.

H2: Among medium powers, those that are more vulnerable are more likely to create SWFs than those that are less vulnerable.

Despite my argument that medium powers are states most likely to create SWFs, these institutions remain relatively rare, and certainly not all medium powers have created them. This is because not all medium powers stand to benefit equally from having a SWF; indeed, invulnerable medium powers have little to gain from the insulating function of a SWF. My empirical tests of this hypothesis show consistent support for the proposition that more vulnerable medium, as measured by a state’s degree of capital and trade openness, are more likely to create SWFs than their invulnerable counterparts. Indeed, it is also true that vulnerability bears no significant relationship to the likelihood of either a small or large power creating a SWF. The effects of vulnerability on the likelihood of a state creating a SWF appear to apply uniquely to medium powers. I therefore reject the null hypothesis in support of my argument.

H3: Medium powers are more likely to create SWFs when systemic risk is high than when systemic risk is low.

Whereas states’ economic policies can render them vulnerable or invulnerable in international markets, so too can systemic factors beyond their control. I therefore hypothesized that periods of higher systemic risk are more likely to cause medium powers to create SWFs than periods where risk is low. My empirical tests of this hypothesis revealed mixed results. First, I find that the period following the Global Financial Crisis are associated with an increased likelihood of states creating SWFs. Even in the context of the ensuing recession, states appeared to be more likely to create SWFs in the aftermath of the GFC. However, these results do not transfer to the Asian
Financial Crisis; the years following this period of increased systemic risk did not appear to be significantly associated with an increased likelihood of affected states creating a SWF. However, even in the absence of empirical support, it is worth noting that four of the six countries most affected by the AFC have SWFs as of 2015. This reality in conjunction with the association between the GFC and SWFs suggests that there may indeed be a relationship between systemic risk and the likelihood of certain states creating SWFs.

**H4:** Politically secure leaders are more likely to create SWFs than politically insecure ones.

In testing my final hypothesis, I create two measures of leadership security based around respective leaders’ tenure in office. My reasoning behind this operationalization is that more secure leaders are more likely to experience longer tenures than less secure ones. To this end, I find consistent and robust support for my argument that more secure leaders are more likely to create SWFs, and this support extends to both democrats and autocrats alike. The evidence presented here suggests that it is appropriate to reject the null hypothesis that leadership security has no effect on the likelihood of creating a SWF.
Chapter 5 – Case Studies

In Chapter 4, I motivated a series of empirical tests to evaluate my hypotheses, and subsequently provided a discussion of my findings. I found robust support for my primary argument that relatively vulnerable medium powers are the states most likely to create SWFs. The task of this chapter is to present a series of complementary case studies to illustrate more fully the relative power dynamics underlying the decision to create, or not create, a SWF. To elaborate on these conditions, I present four detailed cases studies of states that have publicly considered creating SWFs, and have proceeded to create, or not create, this institution following those discussions. Specifically, I consider the experiences of the Maldives and Zimbabwe as small powers, Singapore as a medium power, and Japan as a large power.

There are multiple benefits to supplementing statistical analysis with case studies. As Lieberman (2005, 435) notes, ‘small-N analyses can be used to assess the plausibility of observed statistical relationships between variables’ from large-N analysis. In this sense, a case study approach is useful as a ‘plausibility probe’ for the results presented in the previous chapter. This approach is similarly helpful for illustrating in greater depth the political contexts and decision-making processes surrounding SWFs. Insofar as ‘both LNA [large-N analysis] and SNA [small-N analysis] can inform each other to the extent that the analytic payoff is greater than the sum of the parts,’ this chapter proceeds with four case studies to complement the foregoing empirical statistical analysis (2005, 436).

The first section of this chapter motivates my sample selection. I restrict my cases to those where the outcome of interest, creating a SWF, has been publicly discussed as a policy option by decision-makers, though this outcome varies across the sample. I also select cases that take on substantively relevant values on my primary explanatory variable, relative power, so as to include at least one small, medium, and large power in my analysis. I elaborate on my case selection process in
The following section. This case selection process results in a sample of three cases where SWFs were not created (i.e., negative cases), and one case where a SWF was created (i.e., positive cases).

The second section of the chapter considers the Maldives as a small power that has been unable to create a SWF despite public intentions to do so. This is largely due to financial constraints associated with being a small power. The third section of the chapter considers Zimbabwe as a complement to the Maldives case; contrary to the advice of the IMF, and amidst significant domestic and international criticism, the government of Zimbabwe passed legislation in 2014 to create a SWF, but has subsequently struggled to operationalize its fund. Undoubtedly due to its position as a small power, Zimbabwe has found the costs of establishing its SWF to be entirely prohibitive. As a result, the country’s SWF merely exists on paper, and is essentially an example of a failed SWF as a result. The Zimbabwean case is useful insofar as it further illustrates the ways in which resource constraints inhibit small powers from obtaining SWFs, including under conditions where such states are highly vulnerable and exposed, and would thus likely benefit from such an institution.

The fourth section considers the case of Singapore, a medium power that purposively created a SWF as it simultaneously implemented economic policy changes that dramatically increased its exposure to global markets. As a positive case, Singapore largely corroborates my argument about the states that are most likely to create a SWF; as it encountered greater levels of risk from participating in international markets, Singapore found within its ability to create a SWF, and in so doing has likely benefited substantially. Finally, the fifth section of the chapter turns to Japan, a large power in which policy makers have periodically considered the idea of creating a SWF, but have consistently rejected the idea.

Case Selection

There are a number of challenges associated with case selection in qualitative research design. Indeed, the risk of selection bias, and thus the possibility of systematic error, is arguably
more severe in this tradition than in quantitative research. Unfortunately, random sampling is often unhelpful for resolving this problem. Not only does this approach raise the possibility of selecting irrelevant cases, it can also lead to a non-representative sample given the smaller sizes associated \textit{a priori} with the qualitative approach (Collier and Mahoney 1996, 57). At the same time, generating a sample by selecting on the dependent variable is likely to lead analysts to misstate the magnitude of the causal effects of their key independent variables, which can be a similarly pernicious problem (Collier and Mahoney 1996, 72).

In addressing these challenges, Mahoney and Goertz suggest constraining the selection of cases to those where “the outcome of interest is possible,” and to those where the “value on at least one IV is positively related to the outcome of interest” (2004, 653; 657). They further qualify that selection should be limited to cases that satisfy the scope conditions established in the motivating theory (2004, 660). In other words, they suggest choosing both positive and negative cases where the outcome of interest is not only a possibility, but also where the potential explanatory factors fall within the boundaries established within the proposed argument. These guidelines help to ensure a representative sample comprised of cases that demonstrate meaningful variation on both the causal factors and outcomes of interest.

Based on this advice, I select cases for my sample in accordance with three criteria. The first criterion is that policymakers must have publicly declared an interest in establishing a SWF. I regard a public declaration as a \textit{serious} one; such a declaration exposes leaders to some level of public accountability by virtue of placing a SWF on a menu of policy options. Given the costs involved with establishing such a fund, I do not anticipate that decision-makers will \textit{publicly} consider the idea with any degree of levity. A public announcement is thus an important signal of the seriousness with which leaders are considering the idea of creating a SWF.
This criterion is particularly important for examining cases where SWFs were not created; after all, choosing a negative case where decision-makers never had an interest in establishing a SWF would be problematic for causal inference. Under such an approach, it would be virtually impossible to determine whether a negative outcome arose due to the causal power of my independent variable, relative power considerations, or because political leaders simply had no interest in creating a SWF \textit{a priori}. I thus restrict my sample selection to cases where leaders have expressed a serious interest in creating SWFs.

The second criterion, per Mahoney and Goertz (2004) is that my sample must be comprised of both positive and negative cases, where the former result in states creating a SWF, while the latter result in states failing to create this institution. This criterion ensures that my sample covers the range of possible outcomes on my dependent variable of interest. The third criterion requires my sample to include cases that demonstrate variation across all substantively meaningful values of my key independent variable, relative power. This ensures a sample that not only includes variation on my outcome of interest, but also one that encompasses all possible values along my independent variable of interest as well.

Based on these criteria, I generate a sample consisting of four cases. In each case, national political figures have discussed the possibility of creating a SWF. Further, the sample includes states that can be categorized respectively as a small, medium, and large powers, as each value represents an important dimension on my primary explanatory variable. The sample similarly encompasses both possible outcomes on my dependent variable, including one state that has created a SWF, one that has created a failed SWF,\textsuperscript{18} and two that have abstained from creating a SWF. Table 1 presents a list of the cases included in my sample, and indicates where each case falls across my selection criteria.

\textsuperscript{18} This outcome is essentially the same as a state having no SWF. Despite the existence of one on paper, it would be unreasonable to regard Zimbabwe as a state that has a SWF.
Table 1: Sample Selection for Case Study Analysis

<table>
<thead>
<tr>
<th>Case</th>
<th>Type of Power</th>
<th>Predicted Outcome</th>
<th>Actual Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maldives</td>
<td>Small</td>
<td>~ SWF</td>
<td>~ SWF</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>Small</td>
<td>~ SWF</td>
<td>Failed SWF</td>
</tr>
<tr>
<td>Singapore</td>
<td>Medium</td>
<td>SWF</td>
<td>SWF</td>
</tr>
<tr>
<td>Japan</td>
<td>Large</td>
<td>~ SWF</td>
<td>~ SWF</td>
</tr>
</tbody>
</table>

**Case 1: Maldives – Small power, No SWF**

The Maldives represents an excellent case for examining the plausibility of my primary argument about small powers and the likelihood of creating a SWF. As discussed in Chapter 3, small powers are vulnerable internationally on both a relative and an absolute basis. Given this, small powers stand to benefit greatly from the insulating effects of a SWF. However, while this group of states would likely benefit from having one, the costs of establishing a SWF large enough to provide adequate protection are largely prohibitive. This generally places SWF beyond the reach of small powers, and as such, my theory expects that this type of state is particularly unlikely to create a SWF.

The case of the Maldives is largely consistent with this reasoning. Since its independence in 1965, Maldives has remained a small power internationally. While it has experienced steady economic growth over the past several decades, Maldives’ GDP has consistently placed it among the smallest economic powers globally. Indeed, for the duration Maldives appears in the analysis presented in the previous chapter, its GDP grows from USD $44 million (constant) in the early 1980s to only USD $1.5 billion by 2007, ranking it solidly in the lowest quintile of economic powers through the entire period.

Maldivian leaders have emphasized their country’s small power status on multiple occasions. In the context of the Cold War, for example, when both the Soviet Union and the United States maintained a large naval presence in the Indian Ocean, former President Maumoon Gayoom
described the security position of his small state by invoking the famous adage, ‘when two elephants
fight, it is the grass that suffers’ (Gayoom 1984, 8, qtd in Harden 1985, 6). In the same speech,
Gayoom spoke of persistent ‘foreign military intimidation’ from both the USSR and the US, and
expressed concern over the United States’ 1983 invasion of Grenada, which effectively overthrew its
socialist government (Gayoom 1984, 2-3, qtd in Harden 1985, 7). While not a socialist, Gayoom
nevertheless regarded Grenada as kindred insofar as it was a similarly small and vulnerable state. His
comments reveal the degree to which his administration feared interference from larger powers, and
they highlight the Maldives’ vulnerable relative power position internationally.

Beyond traditional issues of international security, Gayoom has spoken at length of the
Maldives’ vulnerable position in the global economy. At the 1984 Annual Conference of the British
Commonwealth, Gayoom observed that:

The Maldives has not, in company with so many others, been immune from the devastating
effects of the [early 1980s] recession; they have adversely affected our economy and,
therefore, our ability to institute and carry out programmes of national development. In this
respect, the widely held notion that many have of the island states as being remote and
isolated … is, in all terms practical, a fiction. While we could be so described in geographical
terms, it is quite simply no longer true when related to the speed with which the effects of
the conditions of the world beyond reach us (Gayoom 1984 qtd in Harden 1985, 7).

Gayoom’s remarks further underscore the extent to which small states like the Maldives are
vulnerable internationally, and as participants in the global economy in particular.

As a small and geographically isolated state with few natural resources, the Maldives has
remained dependent on imports to obtain most of its goods and services. The Maldives has
relatively few exports, and instead relies primarily on international tourism to generate revenue, as
well as to obtain foreign exchange to finance its imports. Further, until recently the government of
the Maldives levied no sales or income taxes, making it all the more dependent on tourism and
private sector economic activity for revenue (DoS 2011).
Unsurprisingly, Maldives is highly sensitive to variation in international prices. The country has suffered a number of financial and foreign exchange crises, including a major incident in 2008 in which its monetary authority and banks depleted their reserves of US dollars (Moorthy 2008, 8). Since that period, the Maldives has experienced chronic foreign exchange crises, and has never been able to maintain reserves sufficient to finance imports for more than only a handful of weeks (DoS 2011; 2014). This reality has forced the Maldivian central bank to maintain a program rationing the foreign exchange supplied to the country’s banking system (DoS 2014).

Given its position in the global economy, Maldives would stand to benefit greatly from a SWF. Such an institution could provide manifold benefits, including: insulating it from international price shocks, assisting its monetary authority in maintaining a currency valuation favorable to its tourism industry, helping facilitate access to international currencies, and helping to support its development agenda more broadly. Given these anticipated benefits, it is perhaps unsurprising that the Maldivian government has actively considered creating a SWF, and it announced this very intention in late-2008.

Upon his election to the presidency of the Maldives in November 2008, Mohamed Nasheed declared that establishing a SWF would be a primary goal of his administration (BBC 2008). In addition to the aforementioned benefits, Nasheed argued that a SWF would help Maldives address future challenges associated with climate change, including the possibility of obtaining additional land in the event of sea level rise. Nasheed planned to capitalize the Maldivian SWF using revenue from the country’s tourism industry, as well as by selling state assets, utilizing savings generated from reducing the size of government, and by converting his predecessor’s luxurious palace into a university (Ramesh 2008, 1). Nasheed’s Vice President, Mohamed Hassan, echoed his government’s call to create a SWF, noting that such a fund would be essential to the Maldives’ ‘longer-term
perspective’ toward addressing climate change and ensuring a sustainable future for the country (Evans 2008, 13).

Nasheed’s plan to create a SWF was not without controversy. A number of commentators questioned the plausibility of the government establishing a SWF amidst other, more urgent spending priorities (Schmidle 2009). In light of the costs involved with creating a SWF, for example, one journalist characterized Nasheed’s plan as a ‘blockbuster initiative,’ and asked the President bluntly whether he was ‘thinking about the practicalities’ of his policy agenda (Schmidle 2009, 40). The US State Department similarly acknowledged the Maldives’ desire to establish a SWF, but suggested that this was improbable given the country’s ongoing ‘financial issues’ (DoS 2011). In its annual ‘Investment Climate Report,’ the State Department highlighted the Maldives’ chronic and sizeable budget deficits, as well as its persistent foreign exchange shortages, as substantial barriers to establishing a SWF, and speculated that the Maldives would be unable to create one ‘in the near term’ (DoS 2011, 5).

Owing to the country’s economic issues, in December 2008, Nasheed’s government requested from the IMF a USD $93 million loan to help establish control over its fiscal position (DoS 2011). After disbursing two tranches of the loan, the IMF withheld subsequent payments due to concerns about the government’s persistent budget deficits, which continued to grow through 2014 (DoS 2014). Such economic issues are not atypical for small powers, and they highlight the nontrivial obstacles such countries face when seeking to implement large-scale projects such as establishing a SWF.

In 2010, Nasheed’s administration began publicly backtracking on its plans to create a SWF. In the months following the announcement that his administration would create one, Nasheed further qualified that a Maldivian SWF would be used primarily to purchase land in another country for the purposes of resettling Maldivians displaced by climate change (Deen 2010). However, when
asked about such plans two years after this announcement, Maldives’ permanent representative to
the United Nations, Abdul Ghafoor, backtracked, suggesting that ‘Maldives does not have a
relocation plan and had at no time ever considered relocation to another country…’ (Deen 2010).
Ghafoor’s remarks run contrary to the previously stated intentions of the Maldivian government,
and demonstrate a change in policy priorities, both over how the government intended to address
climate change, and whether it could create a SWF in support of these efforts.

Following Ghafoor’s remarks in 2010, the Maldivian government ceased any public
discussion of the possibility of creating a SWF. President Nasheed similarly discontinued raising the
issue in his public addresses. Nasheed left office in 2012 having failed to establish a SWF during his
four-year tenure. His successors have similarly failed to create a SWF, and there is no evidence of
any government discussions to suggest that creating one is any longer a political priority. Indeed, as
of early 2016, discussion of the issue in Maldivian media has all but ceased.

The Maldivian experience with SWFs is largely consistent with the theoretical story I
propose and test in previous chapters. The government of the Maldives openly acknowledges the
extent to which it remains vulnerable internationally. In light of this vulnerability, it has similarly
acknowledged the possible benefits of creating a SWF. While the Nasheed administration expressed
a desire to create one, this policy ultimately failed to materialize under his administration, and his
successors have expressed little interest in continuing pursuit of a SWF. The Maldivian failure to
create a SWF is undoubtedly linked to the economic conditions in the country. As a small power
with a host of economic issues, the costs of creating a SWF have remained prohibitive for the
Maldives. For as long as it remains a small power, I expect this status quo to prevail.
Case 2: Zimbabwe – Small power, failed SWF

Zimbabwe represents an interesting case of a small power creating a SWF, but failing to operationalize it due to prohibitively high costs. As a small and highly vulnerable state, Zimbabwe stands to benefit greatly from a SWF. However, given its ongoing economic instability in combination with its small power status, my theory expects that Zimbabwe would be highly unlikely to create a SWF. Contrary to this expectation, and in a move that surprised a number of commentators, the Zimbabwean government passed legislation to create a SWF in early 2014.

While these actions are theoretically anomalous, the reality of Zimbabwe’s precarious economic position has prevented the country from operationalizing its fund. The Zimbabwean SWF thus exists on paper alone, and should therefore be characterized as a failed SWF. While its actions aimed at creating a SWF were anomalous, the outcome of the process is not. The case of Zimbabwe is thus a worthwhile complement to the Maldives insofar as it further illustrates the constraints faced by small, vulnerable powers in terms of their ability to obtain a SWF.

Zimbabwe is internationally famous for its precipitous economic decline over the past several decades. At its official independence in 1980, Zimbabwe was regarded as one of the wealthiest countries in Africa on both a real and per capita basis. That year, its GDP stood at roughly USD $6.7 billion (constant), placing it solidly in the third quintile of economic powers globally. Following the implementation of a series of notoriously destructive redistributive policies, the Zimbabwean economy began a steady decline in the early 1980s. Economic contraction endured through the mid-2000s, and by 2008 Zimbabwe’s GDP had fallen to roughly USD $4.4 billion (constant), a fraction of its size three decades prior. During this period, Zimbabwe experienced legendarily high rates of annual inflation, which peaked at around 231 million percent in 2008 (WSJ 2011). Over the course of roughly 30 years, Zimbabwe devolved from a relatively wealthy, medium

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19 I make this calculation using data from the foregoing empirical analysis. I create my GDP variable using data available from the World Bank and the Penn World Tables project.
power to a small and highly economically unstable one. As of early 2016, Zimbabwe’s economy places it solidly in the first quintile of economic powers by size.

Like the Maldives, Zimbabwe has suffered a number of chronic economic problems, though frequently on a larger scale. Zimbabwe experiences persistent foreign exchange shortages, for example, and has remained largely dependent on international markets to obtain goods and services. Zimbabwe obtains a bulk of its revenue from exporting mineral resources, and as such is highly sensitive to fluctuations in international prices. For decades Zimbabwe has maintained a wide current account deficit, and the IMF regards its debt position as ‘unsustainable,’ and cites it as ‘a serious impediment to external sustainability and economic development’ (IMF 2014).

Given its economic position, Zimbabwe would doubtlessly benefit from a SWF. As commentators have noted, a Zimbabwean SWF ‘would act to stabilize the economy in the face of mineral price fluctuation ..., provide a savings and investment fund for the benefit of future generations and provide for infrastructural development’ (Mutonhori 2014). However, the state of the Zimbabwean economy places considerable constraints on the government in terms of its ability to capitalize a SWF sufficiently large to provide such benefits. Thus, while Zimbabwe would likely benefit from a SWF, my theory expects that this institution would be largely beyond the reach of the country.

Despite these factors, in 2011, long-term Zimbabwean President Robert Mugabe announced through his Minister of Youth Empowerment and Indigenization, Saviour Kasukuwere, his intention to create a SWF (BBC 2011). As part of the announcement, Kasukuwere stated that the government intended to capitalize its SWF by requiring all mining companies active in Zimbabwe to cede at least 51 percent of control to the government, effectively nationalizing a majority stake in each firm. He further noted that ‘we are all agreed as a government’ on this course of action (Mavhunga 2011). At the time of the announcement, Kasukuwere noted that a SWF would help

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promote economic stabilization and support development in Zimbabwe (Mavhunga and Raath 2011).

The announcement generated consternation both within and outside government. Prime Minister Morgan Tsvangirai, Mugabe’s coalition partner, publicly denied any government plans to create a SWF. His spokesperson noted that ‘a major decision cannot be taken without the approval of the prime minister,’ and emphasized that there were no plans to create a SWF, much less to nationalize a controlling stake in Zimbabwe’s mining sector (Mavhunga and Raath 2011). Other commentators dismissed Mugabe’s announcement, suggesting that such actions could ‘derail a nascent economic recovery’ and that ‘Zimbabwe does not have money’ to create a SWF (BBC 2011). Given the precarious state of Zimbabwe’s economy, another analyst characterized the announcement as ‘overly ambitious,’ noting wryly that he could ‘not see the sovereign wealth fund taking off any time soon’ in the country (BBC 2011).

Government discussions of the possibility of creating a SWF largely ebbed in the wake of Mugabe’s initial announcement, perhaps due to the apparent intra-government discord, though the issue resurfaced in 2013 when Mugabe publicly released a ‘Sovereign Wealth Fund of Zimbabwe’ bill (Machadu 2013). While not yet a legal reality, the bill’s release signaled Mugabe’s intention to proceed with his plan to create a SWF. The move triggered another wave of criticism. In an editorial largely critical of Mugabe’s decision to push forward with a SWF, one commentator noted that:

a budget deficit [in Zimbabwe] is inevitable this fiscal year, and apparently we do not have convenient resources to finance it. Our revenue inflows are shrinking and … we will miss our revenue collection target by [USD] $100m. This is, however, despite the obvious fact that we have overspent our budgeted expenditure by a long way (Machadu 2013).

The editorial then asked pointedly, ‘does it then make sense to further reduce the little revenue currently accruing … by creating an SWF?’ Others seized on a similar point, noting the illogic in seeking to create a SWF at a time when ‘Zimbabwe’s debt position is unsustainably high’
(Chishamba 2014). This point is worth emphasizing because it underscores my argument that small states, in light of their nontrivial resource constraints, are less likely to create SWFs than other types of states.

In advising against Mugabe’s plan, the editorial cited Zimbabwe’s ‘unsustainable external debt,’ the majority of which remains in arrears as of 2016, and declared that ‘a sovereign wealth fund is just one of those brilliant ideas that would work in a different reality,’ observing that ‘if … government settles its external debt, makes budget surpluses, improves industrial competitiveness and the terms of trade…,’ a SWF might be feasible (Machadu 2013). Others noted that ‘a well-performing primary sector is a prerequisite if the SWF is to provide the intended stabilization results’ (Chishamba 2014). These public criticisms of the plan largely accord with my argument and expectations; given Zimbabwe’s status as a small power with an unstable economy, a SWF is likely an imprudent, if not completely infeasible, policy choice.

The plan drew criticism from outside Zimbabwe as well. The IMF voiced opposition to the idea of a Zimbabwean SWF, arguing that it would ‘exacerbate debt distress and complicate the process of arrears clearance and debt restructuring’ for the country (IMF 2014, 17). The IMF emphasized Zimbabwe’s already precarious financial position, noting that its treasury was already spending USD $1.27 for every USD $1 collected in revenue (Herald 2014). The IMF further acknowledged that while a SWF ‘might be helpful over the medium term, the present fiscal stress makes it imperative that the government avoid tying its hands by earmarking revenues’ to create such an institution (IMF 2014, 18). As a result of its analysis, the IMF advised that Zimbabwe indefinitely delay any plans to create a SWF.

Despite this advice, the Zimbabwean parliament passed legislation to establish the country’s SWF in September and November 2014 (Mutionhori 2014; Ruwo 2014). In an apparent backtrack from Mugabe’s initial plan, the SWF bill declared that the fund would be capitalized by diverting 25
percent of existing mining royalties, rather than by compelling a controlling interest in all firms active in Zimbabwe’s mining sector (Marawanyika and Crowley 2014). The stated goal of the new legislation was to support ‘macroeconomic stabilization … including long-term economic and social development objectives,’ as well as to support ‘the revenues of Zimbabwe when these are prejudiced by fluctuation of [international] prices’ (Marawanyika and Crowley 2014).

From its inception, Zimbabwe struggled to operationalize its SWF. Government representatives publicly acknowledged the complete lack of capital that could be used to breathe life into the fund. Stuart Combabach, Secretary of the Office of President and Cabinet, for example, declared that Zimbabwe ‘has no surplus resources to invest in the fund’ (Sibanda 2015). Combabach highlighted Zimbabwe’s national budget for 2016, and noted that it is ‘clear … that expenditure will exceed revenue and the existing trade imbalance is unlikely to ease in the coming year or years,’ and that proceeds from mineral royalties had been earmarked for other spending priorities (Simbanda 2015). He further noted that ‘even if the [SWF] ACT suggests where the funding to capitalize the fund will come from, reality suggests that this is unlikely to materialize in the immediate future in respect to the percentages [of mineral revenues] mentioned in the Act’ (Simbanda 2015). Another commentator noted that Zimbabwe would be forced to borrow capital if it wished to fund its SWF, noting pointedly that ‘it does not make sense to create a SWF and fund it by increasing the budget deficit’ (Ruwo 2014). In reference to the government’s inability to capitalize its SWF, Combabach observed that ‘it was more a political decision than economic rationale that a decision for SWF was made’ (Simbanda 2015).

As of early 2016, the extent to which Zimbabwe will be able to capitalize its SWF remains unclear. Finance minister Patrick Chinamasa has ‘proposed to set aside $1 million towards administrative costs related to setting up’ the SWF during 2016, though he acknowledges this would necessarily imply deficit spending (Majaka 2015). Further, while these funds might work toward
establishing a secretariat and other infrastructure requisite to operationalizing a Zimbabwean SWF, the amount falls considerably short of the volume of capital necessary to create a functional SWF that can operate in international markets. In light of this, commentators have urged Zimbabwe to postpone any additional efforts to operationalize the fund, suggesting instead that it should focus on other priorities (Majaka 2015).

Zimbabwe represents a fascinating case that diverges from expectations, at least in moving forward with the nominal creation of a SWF. Given its relative power position and struggling economy, Zimbabwe’s decision to establish a SWF is theoretically anomalous. Indeed, the abundant criticisms aimed at Zimbabwe, both before and after legislation to create its SWF was passed, largely corroborate my expectations. Commentators within and outside of Zimbabwe argued that such a fund was largely infeasible due to the country’s economic position. This is consistent with my argument that countries in Zimbabwe’s position should be unlikely to create SWFs. Small powers may wish to reap the benefits of a SWF, but are likely to find themselves able to obtain one of sufficient size to provide such benefits. In this sense, while Zimbabwe has technically created a SWF, its inability to operationalize that fund is largely unsurprising.

As of early 2016, reports suggest that the government has only been able to allocate USD $50,000, a veritably trivial sum, toward establishing its SWF (Mutonhori 2014, 20). This amount falls short of the amount necessary even to create the infrastructure necessary to administer a SWF, much less capitalize one such that it can begin operating in global markets. I expect it unlikely that Zimbabwe will be able to allocate more resources to operationalizing its fund in a way that allows the country to realize its goals. For as long as it remains a small power, I anticipate that Zimbabwe will remain without a functional SWF. Thus, while taking the steps to create its SWF was theoretically anomalous, the fact that Zimbabwe cannot breathe life into its fund is unsurprising, and I expect Zimbabwe’s failed SWF to remain the status quo indefinitely.
Case 3: Singapore – Medium power, SWF

The case of Singapore is highly instructive for understanding the conditions under which states are the most likely to create SWFs, and indeed Singapore represents a quintessential model for illustrating the relationship between medium powers, their related concerns over relative power as participants in the global economy, and the ways in which SWFs can help address those concerns. For decades, Singapore has had a medium-sized and ‘extremely open’ economy, and it has been remained vulnerable to an array of international market forces as a result (Bercuson 19995). As an island state, for example, Singapore is largely bereft of natural resources, and is thus largely dependent on imports for energy, food, and other raw materials, making it especially sensitive to fluctuations in exchange rates and international prices (Carling 1995, 25).

I argue that states are highly likely to create SWFs under such conditions, and indeed, Singapore has been somewhat of a pioneer among states that have established such institutions. Singapore founded its first SWF in 1974, a time that closely coincides with its emergence as a medium-power in global markets, and it created its second SWF less than a decade later in 1981. To date, both funds remain operational, and each has been regarded as a model worthy of emulation by other states. Indeed, the Singaporean government treats its dual funds as competitors, and provides financial incentives for managers and bankers in each fund to outperform their counterparts. The remainder of this section examines the conditions that motivated Singapore to create its SWFs before highlighting a number of putative benefits offered by these institutions.

Singapore has been widely acknowledged for its extraordinary economic development since gaining independence from the UK and separating from Malaysia in the early 1960s. Between 1960 and 1995, Singapore’s economy experienced an astounding 12-fold increase in size (van Elkan 1995a, 4). As equally astounding, less than a decade following its independence, Singapore grew
from a fledgling, small economy to a highly stable medium power, and its economic size during this period ranked it solidly in the third quintile of global economic powers. To date, Singapore remains a highly stable and extremely open medium-economic power.

Analysts have largely attributed Singapore’s economic growth to its emphasis on liberal trade and investment policies, carefully managed exchange rates, and government policies aimed at promoting industrialization and labor competitiveness (van Elkan 1995b, 11). To better understand this process, analysts have divided Singapore’s development trajectory into four distinct stages, each of which largely coincides with shifts in Singapore’s degree of global market exposure, as well as the timing of creation of its two SWFs, which occurred in 1974 and 1981, respectively.

From the point it gained independence until the mid-1960s, Singapore’s government heavily emphasized an import-substitution strategy to promote industrial development and increase domestic employment (van Elkan 1995b, 11-2). As a requisite to implementing its import-substitution policies, Singapore maintained extensive import quotas and tariffs during this period. It also carefully managed its exchange rate by pegging it first to the UK pound sterling, and then to the US dollar (Carling 1995, 26). In the mid-1960s, Singapore gradually transitioned from an import-substitution development strategy to one focusing on competitive exports. From this period until the early 1970s, Singapore began implementing a number of major economic policy changes, including removing import quotas and gradually reducing its tariffs, among others (van Elkan 1995b, 13). In 1973, in line with its other major macroeconomic policy changes, Singapore opted briefly for a greater degree of monetary policy autonomy by abandoning its exchange rate peg to the US dollar (Carling 1995, 26). At the same time, it began deregulating its domestic financial system in a process that culminated in 1975.

Singapore’s shift from an import-substitution development strategy to an export-led one is widely credited with helping promote its rapid economic growth. However, these changes
simultaneously increased Singapore’s exposure and its degree of dependence on international markets substantially. Perhaps unsurprisingly, this newfound vulnerability coincided with the creation of Singapore’s first SWF, Temasek Holdings, in 1974. Incidentally, in the process of deemphasizing its import-substitution development strategy, the government of Singapore began in the mid-1960s to divest its stakes in various domestic industries, including ‘a bird park, a hotel, a shoe maker, a detergent producer, naval yards converted into a ship repair business, a start-up airline, and an iron and steel mill’ (Temasek 2016). The government used the revenues derived from very this process to capitalize its first SWF. Essentially, Singapore purposively created this institution at a time when it was actively deepening its presence in global markets and exposing itself to more risk. This is neatly consistent with my argument over the conditions that motivate medium-powers to create SWFs.

While Singapore flirted briefly with floating its exchange rate in the early 1970s, it soon reverted to managing the value of the Singapore dollar (S$) on international markets. This was largely due to steady upward pressure on the value of the S$, as well as a series of external shocks, including especially the global oil crisis in the early 1970s, which destabilized domestic prices in Singapore substantially. After reemphasizing careful management of its exchange rates, the period from 1973 to the present has been characterized by fairly consistent government intervention in foreign exchange markets, and Singapore has maintained a number of de facto regimes ranging from dirty floats to complete fixity throughout this period (Levy-Yeyati and Sturzenegger 2005).

As a result of its exchange rate management, Singapore’s real and effective exchange rates have remained relatively stable since the 1970s (Jin 2000). It’s not inconceivable to imagine a role for Singapore’s SWFs in helping to manage and defend its exchange rate, as well as in promoting macroeconomic stability more broadly. This stability has undoubtedly contributed to Singapore’s steady economic growth, as well as to its role as a global financial center; as of 2000, Singapore
ranked fourth in global foreign exchange trading and fifth in derivatives trading internationally (Cardarelli, Gobat, and Lee 2000, 26).

With regard to its exchange rate management, Singapore has consistently and successfully discouraged speculative behavior since the 1970s, and it has emerged from recessions and regional currency crises relatively unscathed as a result (Chan and Ngiam 1996). In the context of the Asian Financial Crisis, for example, while a number of regional currencies collapsed, including the Thai baht, the Indonesian rupiah, and the Philippine peso, the S$ lost only 18 percent of its value during the first six months of the crisis, and it quickly recovered after that period (Jin 2000, 6). There’s little doubt that Singapore’s large SWFs play a role in deterring speculative behavior, and it is not inconceivable that Singapore has drawn upon its formidable funds to support the value of the S$ internationally. As Obstfeld and Rogoff (1995, qtd. in Jin 2000, 4) have noted, speculators are the most likely to attack when a country cannot credibly commit to defending its currency. Singapore’s two large SWFs have undoubtedly reinforced the country’s ability to make credible commitments to defend the S$ against speculative pressures.

There’s reason to believe that Singapore’s SWFs have supported it in the face of external risk elsewhere. In the mid-1980s, shortly after Singapore created its second competitor SWF, the Government of Singapore Investment Corporation (GIC), a global recession underscored the degree of Singapore’s international exposure. The country was affected severely by the mid-1980s recession due to its high level of dependence on global markets. This forced the government to engage in considerable countercyclical spending to offset the consequences of the recession (Carling 1995, 20). The Singaporean government is notably – and unusually – forbidden from borrowing to support its fiscal needs (Singapore Ministry of Finance 2016). Under certain conditions, the government may borrow money, though regulations preclude borrowing to spend. Given this, and the fact that tax revenues plummeted amidst the mid-1980s recession, it is highly plausible that
Singapore drew upon its SWFs to support its countercyclical spending. This further illustrates the ways in which SWFs can work to insulate vulnerable medium-powers against external risk.

In many ways, Singapore represents an ideal candidate for thinking about the conditions that make states most likely to create SWFs. Singapore is a solid medium economic power, and it is deeply embedded in global markets such that it is also highly exposed. As my theory would anticipate, Singapore is ideally positioned to benefit from a SWF, and this largely accords with reality since 1974 when the country established its first fund. There is ample evidence to suggest that Singapore has benefitted greatly from its SWFs since their creation.

**Case 4: Japan – Large power, no SWF**

In Chapter 3, I argued that large powers are unlikely to create SWFs because they are powerful enough *not to need* such institutions. While such states might be highly exposed in global markets, they are able to address the challenges associated with this exposure without the added assistance of a SWF. This generally suggests that the expected benefits of having a SWF are unlikely to outweigh the various costs of creating such an institution. As a result, I do not expect that large powers will be inclined to create SWFs, and my empirical analysis in the foregoing chapter indeed corroborates this argument.

Japan represents a useful case for illustrating this logic. Japan is both deeply integrated and broadly exposed in global markets, but its economy is sufficiently powerful to manage such exposure without the assistance of a SWF. This case is doubly notable because Japan could create a SWF with relative ease; the combination of the country’s considerable wealth with the Liberal Democratic Party’s (LDP) near monopoly on political power suggest that the costs of creating such an institution would be relatively minimal. Japan could, for example, use a small fraction of its existing *forex* to create a large SWF with minimal consequences for its central bank or taxpayers.
However, despite its ability to create a SWF, and its undoubted ability to do so with relative ease, Japan remains without one. This is theoretically unsurprising, and I anticipate that this status quo will prevail indefinitely; by virtue of its economic size and relative power position in the international system, there is simply no rationale sufficient to motivate the Japanese government to create a SWF.

Since the mid-2000s, there have been a handful of isolated – and unsuccessful – efforts to create a Japanese SWF. In each wave, commentators and policymakers have called on the government to establish a SWF, citing a range of expected benefits from such an institution. These calls have consistently failed to garner support from a majority of Japanese lawmakers, and have similarly failed to captivate Japan’s influential bureaucracies. Indeed, one of the largest and most consistent opponents of a Japanese SWF is the country’s powerful Ministry of Finance, which has consistently characterized such an institution as unnecessary for Japan (Nakamoto 2008b, 4). The remainder of this section examines in greater detail the political debates surrounding the possibility of creating a SWF in Japan, and therein illustrates why the government has never created one.

Since post-WWII reconstruction, Japan’s economy has remained one of the world’s largest. Indeed, Japan’s meteoric rise during this period has been widely characterized as ‘miraculous,’ and the country has been a member of the G7 – comprised of the world’s most powerful developed economies – since the group’s inception in 1975. From 1950 to 2012, the duration in which Japan appears in the dataset used in the preceding chapter’s empirical analysis, its economic size has ranked it solidly in the fifth quintile of global economic powers, revealing that Japan’s economy has remained among the largest internationally on a consistent basis. Unsurprisingly, Japan’s powerful economy has enabled the country to acquire considerable national wealth, and the country continues to maintain formidable forex, which topped USD $1 trillion in 2008 (Jiji Press 2008b). Japan’s economic size and substantial wealth, including especially its reserves, underscore the its ready ability to establish a SWF of considerable size.
Indeed, commentators have often cited Japan’s economic power and huge reserves as raison d'être for creating a SWF (Bary of Barronis 2007, 1). In 2007, Morgan Stanley predicted that Japan would ‘have one of the largest sovereign wealth funds [globally] in the next two or three years’ due to its considerable accumulation of forex (Bennett 2007, 17). In its analysis, Morgan Stanley noted that Japan maintained some USD $700 billion of reserves in excess of its calculated needs, and that the country would thus inevitably create a SWF (Sesit 2007, 14). This assessment again underscores the case with which Japan could create a SWF, but it is also notable insofar as it fails to consider the purpose of a SWF beyond possibly obtaining higher returns on Japan’s forex. Of course, it is highly likely that a well-managed SWF would deliver higher returns than mostly idle forex, but if this was the sole criterion for creating a SWF, more states would undoubtedly create them. If analysts broaden their understanding of why states might create a SWF to consider their insulating effects, it becomes less surprising that Japan has failed to create one, and unsurprising that Morgan Stanley’s prediction has failed to materialize. Japan may have the ability to create a SWF, but it simply lacks the need for one.

Following Morgan Stanley’s assessment, a small faction of Japanese lawmakers convened to discuss the possibility of creating a SWF using the country’s forex (Jiji Press 2007, 1; Lewis 2008a, 61). Reports from the group’s discussions were notably silent on the expected benefits of a SWF for Japan, apart from a desire raise returns on government reserves (Nakamoto 2008a, 5). Yuji Yamamoto, an LDP parliamentarian and former financial services minister, spearheaded the talks, and they culminated in a proposal to use USD $100 billion of Japan’s forex to establish a SWF. The proposal, however, managed only to garner support from 42 of 475 members of Japan’s House of Representatives (Nakamoto 2007, 6). The small degree of support is notable given the relatively low costs of creating a SWF using Japan’s reserves; to be sure, MPs had little to expect by way of public backlash for supporting such a proposal.
Beyond parliament, government regulators and bureaucrats similarly condemned the proposal. One such regulator argued that ‘Japan, the world’s second-largest economy, has graduated beyond the need for such a fund’ and that SWFs ‘are for developing countries’ (Nakamoto 2008b, 4). This rebuff is noteworthy, and it is largely consistent with my expectations about the attitudes of large powers toward creating SWFs. Despite its ability to create one, the Japanese government dismissed the idea of a SWF as being unnecessary, and as a tool more suited for ‘developing countries.’ Japan’s powerful Ministry of Finance similarly weighed in on the nascent proposal, dismissing the idea as needlessly risky, while its cabinet minister declared that he ‘didn’t think such a fund would be created in Japan’ (Hayashi 2008, A7). Yet another regulator suggested that a better alternative would be simply to distribute a portion of Japan’s forex across the population to boost domestic consumption (Chandler 2008, 9).

In the face of broad opposition, political discussion of a SWF ebbed briefly before a small cohort of LDP lawmakers assembled a new team to consider the issue for a second time in winter 2008 (WSJ 2008, 10). These efforts drew a new round of scrutiny from within the LDP, including direct criticism from Prime Minister Yasuo Fukuda, who urged caution, noting that SWFs have ‘disadvantages,’ though he stopped short of highlighting any (Jiji Press 2008a, 1). Other lawmakers echoed Fukuda’s concerns, suggesting that the issue be ‘studied cautiously’ while indicating that there was likely to be a lack of public support for a SWF (McClatchy 2008a).

The idea of a Japanese SWF drew criticism from the private sector as well; in a novel objection, Japanese economist Hajime Yamazaki argued that creating a SWF ‘would go against the concept of structural reform that the LDP has pushed forward’ and that the LDP should aim ‘to put in the hands of the private sector whatever could be done by the private sector’ (Yomiuri 2008). This second round of discussions about creating a SWF were quickly quashed, with the Finance Ministry again publicly dismissing the idea (Terada 2008). The Bank of Japan simultaneously
declared that it had ‘no plan at all to consider a proposal to set up a sovereign wealth fund…,’ suggesting that the issue was effectively off the table for a second time (Jiji Press 2008c).

A virtually identical pattern of political discussion resurfaced for the third time in summer 2008, with a small group of lawmakers again recommending that the government consider creating a SWF (Nakamoto 2008c, 1). For the first time, proponents appeared to invoke national security concerns vis-à-vis China, noting that a SWF could be wielded strategically to secure access to natural resources and rare metals in the face of China’s periodic embargoes on such goods (McClatchy 2008c). Perhaps unsurprisingly, these calls were met with minimal support, and discussions again quickly faded.

Following the three concerted pushes to create a Japanese SWF, the issue has resurfaced in political discussions periodically, albeit with much less frequency. In subsequent discussions, the idea has failed to gain even marginal political support, and the issue has never achieved as much momentum as earlier efforts (Nakamichi 2010). In each instance, the Bank of Japan and the Ministry of Finance have remained steadfast opponents, dismissing a SWF both as needlessly risky and unnecessary for Japan (Dawson and Nakamichi 2011, 4). Indeed, the issue appears to be fading entirely from Japanese political discourse, and there exists no evidence of government discussions of creating a SWF since at least 2011.

As of 2016, Japan remains without a SWF, despite periodic and limited movements aimed at creating one. This is theoretically unsurprising. While Japan has the ability to create a SWF, there is a lack of willingness to do so because the country lacks the need for such an institution; indeed, Japanese politicians and bureaucrats have consistently dismissed the idea of a Japanese SWF as unnecessary. While there remains the possibility that Japan could create a SWF in the future – the issue remains right-censored, after all – I expect the status quo to prevail indefinitely. As a large
power, Japan simply lacks any rationale sufficient to motivate it to create a SWF, as illustrated by periodic public discussions on the issue.

**Conclusion**

The task of this chapter has been to complement the preceding empirical analysis with case studies that illustrate the relative power considerations underlying the decision to create SWFs. The case studies presented here corroborate the empirical support in the previous chapter for my argument that medium powers are the states most likely to create SWFs. I have provided a detailed analysis of four cases consisting of small, medium, and large powers, all of which have seriously considered the idea of creating a SWF.

In the cases of Maldives and Zimbabwe, both small powers, political discussions largely converged on the belief that each country would benefit immensely from an operational SWF. In the case of Maldives, however, the costs proved prohibitive, and the issue eventually disappeared from the country’s political agenda completely. This is consistent with my expectations about small powers and SWFs. While such countries are highly vulnerable, and would thus stand to benefit from a SWF, the costs of creating such an institution are simply too great to prove feasible.

The case of Zimbabwe similarly illustrates this logic; while Zimbabwe is anomalous in that it created a SWF amidst general advice to the contrary, it has struggled to operationalize its fund. As of 2016, the country has allocated only USD $50,000 to the task of breathing life into its SWF. Functionally, this is equivalent to the country having no SWF whatsoever, and I therefore characterize the Zimbabwe’s fund as a failed SWF. The resource constraints that have contributed to this failed SWF usefully illustrate the logic underlying my argument for why small powers are unlikely to obtain SWFs.

As a medium power, Singapore represents a useful case for thinking about the candidates most likely to create SWFs. Singapore is both exposed and relatively vulnerable in international
markets, and its notable economic growth following independence provided it with the ability to establish a SWF. Consistent with my argument, Singapore created its first if two SWFs in 1974, and it remain operational to date. Further, there is ample evidence that its SWFs have provided enormous benefits to Singapore in the face of external economic adversity.

Finally, my fourth case, Japan, is useful for understanding the relationship between large powers and SWFs. The financial and political costs of creating a SWF in Japan would be minimal, and perhaps trivial. Despite this fact, while discussed periodically, the idea of creating a Japanese SWF has never garnered meaningful support or momentum. It is therefore probable that remains without a SWF because the rationale to create one does not exist. It is similarly likely that this reality will persist indefinitely given Japan’s status as a large power.

In the next chapter, I conclude this dissertation. I briefly review my argument and findings before turning to the broader implications of this project. Specifically, I consider the implications of my findings for the research program considering SWFs in IR and IPE, and I also consider the implications of my findings for policymakers. I then turn to the future of the research program in IPE on SWFs by highlighting a number of future questions that emerge from this study.
Chapter 6 – Conclusion

To date, SWFs have received relatively little attention within international relations. Where scholars have considered the topic, they have tended to focus on the possible risks associated with sovereign governments operating as investors in private markets across borders. As a result of the relative lack of research considering SWFs, there remain a number of important questions surrounding them. Indeed, the task of this dissertation has been to answer one fundamental question about these institutions: why do states create them?

In addressing this question, I propose a novel explanation for why certain states create SWFs despite the associated costs and risks. I position SWFs as an institution well suited to help states manage the risks associated with participating in the international economy. Conceiving of SWFs as a type of insurance for states sheds light on the conditions under which certain states are the most likely to create them. Based on this observation, I reason that relatively vulnerable, medium powers with durable leaders are the most likely to create SWFs. I then motivate a series of empirical tests to evaluate hypotheses emerging from this argument. I find robust support for my argument, and am therefore confident in concluding that SWFs are a vulnerable medium-power institution, and that states create them as a type of insurance against risk.

In the remainder of this chapter, I discuss the implications of this project for the policy community. I also discuss the implications of the project for research in international relations, and in political economy, in particular. Finally, I consider a number of possible research avenues that build on the argument presented in this dissertation.

Implications for policy

Given trends in the creation of SWFs in recent decades, it is not unreasonable to assume that these institutions will continue to spread. Indeed, this project has provided a roadmap for
understanding where SWFs are likely to emerge in the future. I fully anticipate that rising small
powers, or existing medium powers, will consider creating SWFs as they integrate more deeply into
global markets. I therefore expect that SWFs will become an increasingly common fixture in the
international system. Insofar as no states have yet to dismantle their SWFs, these institutions are also
likely to remain a permanent fixture in global markets. This raises nontrivial considerations for
policymakers, and for those concerned about the spread of SWFs, in particular.

To date, the bulk of attention afforded to SWFs from the policymaking community has
focused on the possible risks posed by these institutions (i.e., Helleiner 2009; Kirshner 2009;
Schumer 2008). As I discuss at length in Chapter 2, commentators fear that governments will wield
their SWFs to pursue their geopolitical strategic interests rather than behaving as traditional
commercial investors. Policymakers have expressed related concerns that these institutions might be
used to destabilize firms, or even to disrupt the markets in which they operate. Given the
considerable size of most of the world’s SWFs, these risks are not inconceivable.

Incidentally, these fears have largely been voiced by the world’s large powers, who
themselves lack SWFs, but who preside over economies that present attractive investment
opportunities for outside funds (see Lewis and Duncan 2007). To be sure, such concerns over the
motives of SWFs warrant attention. However, in focusing primarily on the consequences of SWFs, the
policymaking community has often taken for granted the causes of these same institutions. As a
result, commentators are typically operating with only a partial understanding of SWFs. This may
lead to counterproductive policy decisions as states consider regulating the investment activities of
SWFs operating in their markets, or as they consider preventing such investments entirely, as some
have (see Truman 2007). Doubtlessly, understanding the causes of SWFs has the ability to shape the
ways in which we think about their consequences, and it may temper political reactions to SWFs as a
result. This project has aimed to make a meaningful contribution in this regard.
Policymakers who fear the motives of the world’s SWFs may take comfort in understanding that they are created *primarily* to protect their sovereign principals from outside risk. Given this purview, it seems unlikely that a bulk of the world’s SWFs have been established as vehicles for pursuing the foreign policy objectives of their home states. Rather, it is more appropriate to think of SWFs as tools designed to help their host states navigate the turbulent waters of the global economy. While this purpose does not preclude states wielding their SWFs to achieve political objectives, it does marginalize the possibility.

As I have demonstrated, the states that operate SWFs in the international system are themselves highly vulnerable and exposed. This suggests that for states with SWFs, insuring and insulating themselves is likely to take precedence over other objectives. In light of this, policymakers may wish to temper any protectionist impulses with regard to SWFs. At a minimum, policymakers can observe the extent to which host countries are vulnerable as a proxy for thinking about the ways in which they are likely use their funds.

**Implications for existing and future research**

Within international relations, there has yet to emerge a coherent research program focusing on SWFs. As I discuss at length in Chapter 2, this topic has received relatively scant attention from scholars of international relations, and from political economists, in particular. Where research on SWFs does exist, it has tended to focus on the security implications of this type of institution, and has thus emerged from small enclaves in the subfields of policy or security. One goal of this dissertation is to breathe life into a research program within political economy that takes SWFs as its focus.

In addressing a foundational question about SWFs, my hope is that this project can serve as a base from which a research program on SWFs can grow. There are a number of questions about
SWFs that emerge from this project, and even more about SWFs that remain unanswered. A productive and well-rounded future research program on SWFs may wish to continue to elaborate on their causes, for example, but should also consider both their design features and consequences. I touch on each in turn.

With regard to design features, there are a number of axes of variation across the world’s SWFs that warrant attention. Future research projects may wish to consider variation in how governments fund their SWFs, the extent to which they are autonomous or subordinate, and how they are designed in terms of size, internal governance structure, and operational transparency. Exploring variation across these dimensions may shed light on the precise ways in which governments use their SWFs, and what the possible consequences of such funds may be. Further, despite the notorious opacity of many of the world’s SWFs, data on these variables can be readily obtained, suggesting the possibility of meaningful progress in political economy research on this subject.

With regard to the consequences and effects of SWF, one project emerges directly from this dissertation. If states indeed utilize their SWFs to insulate themselves against risk, we should expect to observe a positive association between SWFs and different measures of macroeconomic stability. A project might therefore consider the effects of SWFs on promoting stability across a number of dimensions in their host countries; indeed, this project would serve to complement and possibly reinforce the results presented here. After all, demonstrating the ability of SWFs to contribute to stability in the face of external risk reinforces my contention that states are creating them for this very purpose.

Yet another possibly productive research program considering SWFs could evaluate systematically the degree to which they actually pose risks to the states and markets in which they invest. Anecdotes about this topic abound, but to date, there have been no systematic efforts to
investigate the extent to which SWFs are *actually* increasing risk or causing harm. There remains much to consider in this regard in terms of the possible consequences of SWFs.

Ultimately, a number of questions about SWFs remain unanswered. In seeking to explain why states create these institutions, one task of this dissertation has been to lay a foundation from which these questions can be addressed. Understanding SWFs as institutions created to insulate states from external risk has hopefully provided a fruitful template for considering further questions about the causes, design features, and consequences of SWFs.
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