The Demise of Sovereign Wealth Funds

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Abstract

Sovereign wealth funds (SWFs) embody the state's growing insertion in the global financial system. While the bulk of the SWF literature has centred around the dynamics behind their establishment and geopolitical utility, there is very little research on the factors behind SWF exhaustion. Drawing from conventional political and economic explanations, this paper finds that SWFs are almost always depleted in highly unstable political environments, while economic crises rarely impact SWFs to the point of exhaustion. The article presents a theoretical foundation for SWF exhaustions by examining political instability in different regime types. In weakly institutionalized regimes, SWFs are more prone to exhaustion as incumbents govern in recurrently uncertain environments and prioritize short-term goals, which are typically incompatible with funds' objectives. Conversely, highly institutionalized regimes enjoy greater stability and certainty, which sustain the long-term nature of SWFs. The argument is substantiated through a comparative analysis contrasting the effects of (in)stability in Venezuela's exhausted FIEM and FONDEN and Azerbaijan's resilient SOFAZ.

Keywords: Sovereign wealth funds; domestic politics; political instability; regime vulnerability.

Introduction

The rise and relevance of sovereign wealth funds (SWFs) have gained attention in the past 15 years. Such consideration is properly deserved; SWFs' assets under management (AUM) skyrocketed from approximately US$ 4trn in 2009 to about US$ 9trn in 2020, with over 50 funds created between 2000 and 2016 (Megginson et al., 2021; Barrowclough, 2022). What makes these funds noteworthy is the fact that they are government-controlled institutions with no explicit liabilities that manage sizable amounts of capital. Unsurprisingly, this type of sovereign investment carries political, economic, and security concerns for recipient states, and questions about their impact on the global financial system.

Indeed, the persisting trend of states' assertion in the global economy poses puzzling questions about the political impact of SWFs. Whether these funds possess merely financial or political objectives is a question that has gained considerable attention in the scholarly literature (see Balding, 2012; Megginson & Fotak, 2015; Babic, 2023). Notably, a significant bulk of SWF research has brought into play the influence of domestic political and economic structures to explain SWFs' establishment (see Braunstein, 2017) and developed economies' policy responses to sovereign investments (Thatcher & Vlandas, 2021). In this discussion, domestic considerations are essential because 'it is generally more useful to employ a domestic or comparative political analysis' to understand SWF behavior (Helleiner, 2009, p. 303). Moreover, if SWFs 'are subject to different preferences, goals, and objectives underlying decision-making *within their respective domestic authority structures*' (Clark et al*.,* 2013, p. 31), then understanding the domestic-political environment of SWF arrangements is critical for informed considerations of their dynamics and outcomes (see Braunstein, 2022, p. 26). However, very little attention has been paid to SWF exhaustions—the substantial and lasting consumption of the funds' assets to (near) zero in a sustained or sudden manner to the point of inoperability. Why have some SWFs gone bust while others have remained more resilient? What accounts for the exhaustion of these funds in countries like Papua New Guinea, Nigeria, or Ecuador, but not in others like Vietnam, Australia, or Trinidad & Tobago? Considering the abundance of literature dealing with leaders' choices in establishing SWFs, this article aims to deepen our understanding of these funds' lifecycles by examining the factors that influence leaders' decisions to deplete their SWFs.

In that regard, the present work argues that political instability is almost always determinant for SWF demise. A key commonality among exhausted funds' environments lies in the instability originating from persistent threats or actual actions aimed at subverting the regime (Goldstone et al., 2010, pp. 191-192; Schedler, 2013, pp. 27-28). Political instability does not arise simply from the onsets of civil wars or military coups; instead, it is built from the *actual* or *potential* threats posed by the opposition, civil society, and regime insiders. As one author notes:

> The notion of regime threats, more concretely, designates collective actions that carry the *potential* of destabilizing a political regime, or, more obliquely, of *setting into motion* corrosive interactive dynamics that may end up destabilizing the regime. With destabilization meaning: the creation of widespread *uncertainty* about the sustainability of the regime (Schedler, 2013, p. 33, emphasis added).

Such instability arises from the possibility or occurrence of vertical (anti-government demonstrations, mass strikes, electoral rebellions, and riots) and horizontal (government crises, purges, and military coups) challenges threatening regimes' governance and survival (Schedler, 2013, pp. 202-203; Blanco & Grier, 2009, pp. 77-80). Remarkably, instability from governance challenges and survival are mutually reinforcing because 'If a government loses its capacity to govern, its hold on power turns fragile. If its continuity in power is put into question, its capacity to govern is bound to erode too' (Schedler, 2013, p. 34). Hence, political instability stems from vertical and horizontal challenges geared towards destabilizing the regime.

Political instability and SWF exhaustion are linked due to the impact of uncertainty on leaders' political time horizons (Kendall-Taylor, 2011). Countries with highly consolidated regimes, namely both full democracies and autocracies, enjoy higher levels of stability and certainty thanks to the firm entrenchment of formal and informal institutions and well-established rules and processes that prevent impactful disruptions to the regime's governance and survival (Gates et al., 2006; Knutsen & Nygård, 2015; Epstein et al., 2006; Schedler, 2013). Thus, leaders in these regimes can enjoy longer political time horizons and broaden their attention to other non-political concerns, such as profit maximization. These long timeframes, in turn, contribute to the durability of SWFs as leaders have few incentives to utterly empty the assets hoarded in the fund. Conversely, weaker, unstable regimes, like fragile democracies and competitive autocracies, experience shorter time horizons from low levels of institutionalization and lack of political dominance. As Goldstone and co-authors demonstrate, non-consolidated regimes have 'markedly higher relative odds of future instability than full democracies or full autocracies' (2010, p. 197), propelling vertical and horizontal threats that are more frequent and impactful to the regime. That is, the inherently insecure conditions and short-termism of unstable regimes are ultimately incompatible with the long-term orientation of SWFs (see Aizenman & Glick, 2009, pp. 355-356). The ensuing fears drive leaders to draw down funds' resources to extract short term political benefits, emptying them in the process.

The analysis and evidence exhibited in the paper offer a novel approach for studying the politics of SWFs for three reasons. First, it presents a systematic and comprehensive framework that has not been applied in previous studies of SWF mismanagement. As explained below, the demise of SWFs has been an understudied topic. The bulk of (scarce) research on SWF failure has revolved around political and economic explanations that have been neither developed theoretically nor tested against SWF exhaustion.

For instance, Shih regards SWFs as 'tools of domestic political survival' where unified autocracies 'are more likely to direct SWFs to maximize long-term profit,' while 'fragmented' autocracies are less likely to manage their funds accordingly given internal infighting (2009, 328). That argument is correct in that regimes with longer time horizons are more likely to seek profit-maximization strategies. My argument, however, advances two issues that are beyond the scope of Shih's analysis. Firstly, in addition the only two hegemonic autocracies studied by Shih (China and Singapore), the present work evaluates different regimes, from highly institutionalized democracies and dictatorships to insecure, unstable borderline democracies and competitive autocracies. Expanding the empirical evidence to include almost 40 countries with different regime types increases the validity and representativity that Shih's study lacks. Secondly, the time horizons, profit maximization argument by Shih increases our understanding of how autocracies rely on SWFs as survival tools. But, unlike the present article, Shih does not address the issue at hand: the demise of SWFs. In sum, this paper differs considerably with Shih's work, in both substance and empirical evidence and elucidates the unexplored mechanisms for SWF demise.

Hence, the article provides novel explanations with comprehensive arguments, theoretical foundations, and enlarged empirical evidence that facilitate our understanding of which funds are more likely to experience exhaustion. A fuzzy-set method à la Charles Ragin (2000) is employed to explain SWF demise by testing whether traditional causal configurations in the literature—namely economic crises and political instability—carry the necessity and/or sufficiency for that outcome. The results demonstrate that political instability is almost always necessary and sufficient for SWFs depletion, while economic crisis is rarely consequential.

Second, this article fundamentally differs from other works that study SWFs only in full democracies and/or autocracies (see, Drezner, 2008, pp. 119-125; Knill et al., 2012; Wang & Li, 2016; Bortolotti et al*.,* 2017; Hatton & Pistor, 2011; Yi-chong & Bahgat, 2010; Grigoryan, 2016; Clark et al., 2013). Instead, the present analysis considers regimes' 'diminished subtypes,' such as electoral autocracies and borderline democracies (Lindberg, 2009; Schedler, 2013). This article bridges those gaps through a qualitative, comparative analysis of how less institutionalized, uncertainty-ridden regimes are more prone to devour their funds' assets than their institutionalized, stable peers.

This study makes a valuable contribution to the broader literature in International Political Economy (IPE) by examining the impact of states' domestic political dynamics in the global economy and financial system. Because IPE 'provides us with a systemic perspective on the

consequences of the rise of transnational state capital' (Babic et al., 2020, p. 440), studying why and when SWFs would *disinvest* capital from other markets and its consequences directly advances our understanding of the state as a shaper of the global economic structure. The article explores the potential risks and impacts of capital flows from SWFs into developed economies, concretely the sudden threat or actual divestment of capital from recipient states, which could have destabilizing effects on financial markets (Cohen, 2009; Kamiński, 2017, p. 34; Kimmitt, 2008; Rose, 2019, p. 24). In line with Trudelle (2022, p. 3), the findings challenge the conventional conception of SWFs as funds with 'long-term, apolitical investments alongside low pressure for short term profits.' This article specifically emphasizes the constraints that political instability exerts on SWF management and the potential systemic risks that could emanate from sudden disinvestment measures (see Conclusion and Discussion section).

The paper unfolds as follows. The next section systematically reviews the crucial literature on the political and economic sources of SWF exhaustion. It lays out the theoretical foundation for the argument that SWF demise is almost always preceded by political instability. The following section introduces the fuzzy-set method and clarifies how this set-theoretic, case-oriented approach tests the two causal conditions' necessity and/or sufficiency for the emptying of SWFs. The results confirm that political instability is *almost always* necessary *and* sufficient for SWF depletion, while economic crises are very rarely a determining cause. The results are backed by a comparative case analysis proving how political instability led to the utter consumption of Venezuela's funds (FIEM and FONDEN), while lower instability discouraged the Azerbaijani regime from utterly depleting its fund, SOFAZ. Finally, the concluding section summarizes this paper's argument, discusses the risks of SWF exhaustions for financial markets, and offers guidance for further research.

The Political Economy of Sovereign Wealth Fund Exhaustion: The Effects of Political Instability and Regime Types.

The literature's most common explanations for the utter consumption of SWF assets are rooted in political and economic causes. Among political pathways for fund depletion, Truman (2010) mentions governments' temptations to use the large amounts of funds to spend domestically while also facilitating corruption schemes. In briefly mentioning SWFs that have gone bust, Truman correctly contends that 'short-term political pressures' play a role in cases of SWF depletion (2010, p. 39). However, his analysis falls short of clarifying how exactly these pressures lead to the funds' demise. Another study mentions that funds were abolished in Ecuador, Chad, and Papua New Guinea

(PNG) as governments found them 'operationally or politically unworkable' (Ossowski et al., 2008, p. 9) without a clearer statement of the relationship between political factors and SWF exhaustion. Finally, the lack of strong fiscal institutions, rules, and independent oversight (Bauer, 2017), and political leaders' direct involvement in funds' management (Bernstein et al., 2013), have also been profiled as causes for funds' mismanagements. Overall, there is a logical rationale behind these political explanations, but these studies have been unsuccessful in presenting a more comprehensive and theoretically informed argument that clearly outlines the process for SWF exhaustions.

Economic determinants similarly offer some explanations SWF depletion. Most economic accounts emphasize the inability of some governments to generate surpluses over time and the harmful impact of external economic shocks (see Délechat et al., 2017; Aguilera et al., 2016, p. 17). Specifically, some observers hold that 'the durability of an SWF hinges on its owner government's capacity to generate surpluses over time,' further explaining that if a government runs deficits permanently, 'it won't be able to make deposits into the fund' (Délechat et al., 2017, p. 15). Most recently, in analyzing 'SWF failures,' some analysts asserted that mismanagement and adverse economic conditions (e.g., high debt levels and procyclical policies) fuel SWF failures (Carpantier and Vermuelen, 2021, pp. 14-18). Indeed, these economic explanations, from the outset, have a self-evident causal association in that economic crises will not only prevent funds from growing but also lead to the funds' drawdown as governments starve for capital to reverse unfavorable economic conditions.

While both political and economic camps offer arguments that could potentially explain SWF demise, they suffer from important shortcomings. The most basic reasoning from the political factors is that leaders face short term pressures that incentivize the consumption of funds' assets for political benefits (Truman, 2010). As Shih (2009) poses, SWFs are essentially seen as survival tools for incumbents. However, no cohesive theoretical evidence backs these arguments in the context of SWF exhaustions. Thus, this paper develops theoretical and empirical paths on how political factors induce the demise of SWFs. Specifically, the article looks at political instability to capture risks and challenges that condition leaders' security in power and choices.

The economic argument suffers not so much from a lack of theoretical but of empirical backing. Conventional wisdom would agree with the assumption of SWF failure stemming from recurring government deficits or adverse economic conditions, which urge leaders to drain their funds to address prolonged economic declines. After all, the principal reason why SWFs exist is

to prevent or mitigate further economic challenges (see Balding, 2012, Ch. 1). However, many countries that have suffered from economic crises did not experience SWF exhaustion, such as Angola, Azerbaijan, and Trinidad & Tobago. Conversely, countries like Bolivia, Gabon, Mongolia, and Nigeria experienced substantial or full SWF exhaustion, even though they had relatively well-managed or booming economies in their funds' operational lifetime. In short, while economic factors may seem relevant from a theoretical standpoint, empirically these are not determinant for the occurrence of SWFs exhaustion.

Since the domestic political reality of sovereign sponsors defines whether SWFs will prove resilient or ephemeral, I seek to parse out the theoretical underpinnings of SWF demise. As mentioned in the introduction, domestic instability arises from vertical and horizontal threats to a regime's governance and survival. In the face of regime-threatening events, leaders worry about their grip on power, especially their ability to govern *and* survive. Hence, ongoing instability will usually force incumbents to shorten their time horizons and prioritize the prevention, or outright reversal of, these crises as 'they cannot expect to be in office long enough to reap the gains' of long-term strategies associated with SWFs (Kendall-Taylor, 2011, p. 326). Under these circumstances, SWFs are less likely to survive as leaders' insecurity incentivizes them to drain resources from the fund to weather those chaotic times. Likewise, the recurrent unstable setting inhibits incumbents from re-capitalizing the fund in the aftermath of asset reductions because they cannot afford to keep saving economic resources for the future in view of current or potential threats. In essence, political instability shortens the political time horizons of regime leaders, compelling them to tap funds' resources to prevent or halt further instability but, sooner or later, exhausting their SWFs.

Given that political instability varies among different regimes, identifying which regimes are more likely to experience and vulnerable to these destabilizing actions furthers the theoretical relevance of SWF exhaustions. Scholars specialized in studying and conceptualizing regimes have been fairly consistent in identifying six regime sub-types in the range between full democracies and autocracies, which have been conventionally comprehensive in covering the spectrum of regime diminished subtypes (see Figure 1). At the extremes of stability, consolidated regimes enjoy a highly certain and secure political reality compared to other polities. They operate in environments where leaders can prolong their time horizons and pursue non-political goals as they are the least likely to experience destabilizing actions; and, even if such actions occur, their impact on the ruling coalition's survival and governance is minimal. Full (liberal) democracies and (closed)

autocracies, like Norway and Qatar, respectively, are the most stable, consolidated types of regimes. Institutional consolidation and low uncertainty limit the potential for destabilizing challenges and their impact on governments' survival and governance. As Gates and co-authors put it, 'institutional reinforcement greatly enhances regime stability,' pointing to the 'significantly greater levels of stability enjoyed by [full] Democracies and Autocracies' (2006, p. 906).

Hegemonic electoral autocracies and electoral democracies represent regimes in the mid-levels of stability. Hegemonic autocracies like Azerbaijan and Angola are also, by definition, very stable (Schedler, 2013, pp. 105-17), although their exposure to semi-competitive elections preclude them from having the extreme security of closed dictatorships. Similarly, several electoral democracies, like Chile or Ghana, are moderately stable given their relative institutionalization of political and electoral processes. However, electoral democracies can at times suffer from instability—especially during times of institutional weakness from domestic political challenges (Roessler & Howard, 2009, pp. 106-109; Schedler, 2013, p. 79). Overall, while SWFs in these regimes are not completely immune from short-term pressures, domestical political dangers are usually limited, and the likelihood that credible, regime-threatening vertical and horizontal challenges take place is correspondingly low.

At the lowest levels of political stability lie borderline democracies and competitive electoral autocracies. Borderline democracies, like PNG and Venezuela in the early 2000s, are much more unstable than electoral democracies. Borderline democracies not only lack attributes of democracy but also constantly violate them, positioning them much closer to the authoritarian camp (Schedler, 2013, pp. 79-81). These hybrid regimes suffer from autocratizing attempts, which fuel prolonged civil unrest, opposition attempts to oust the incumbent through institutional and extra-institutional means, and potential horizontal challenges from weakly-developed networks within the ruling elite. Competitive autocracies, such as Nigeria and Mauritania, are the most unstable and uncertain types of autocracies because their low levels of authoritarian institutionalization make them more vulnerable to electoral uncertainties and intra-elite conflicts (Morse, 2018, Ch. 3). These 'halfway houses' are also quite shaky because of their susceptibility to somewhat contested elections—either by allowing the opposition to gain political representation or triggering autocratic backslashes within the regime (Carothers, 2018). Put simply, because these regimes are more likely to experience, and be impacted by, instability (Goldstone et al., 2010; Knutsen & Nygård, 2015, p. 668), they can never feel safe nor secure. Indeed, it is in these countries where SWFs are most likely to disappear as instability-ridden settings shorten leaders' time horizons, driving

them to prioritize immediate goals of survival and governance rather than financial ones associated with SWFs.

[Figure 1]

In a nutshell, the theoretical basis examined how political instability is a decisive factor for SWF exhaustion. Leaders in unstable regimes are more likely to utterly deplete their SWFs given their short time horizons caused by perennial instability, uncertainty, and insecurity. Conversely, governments in more stable regimes have little impulse to deplete the capital amassed in their funds since they face few and usually non-credible threats, enabling them to pursue profit-maximization strategies in the long term. The next section introduces the research design, concepts, and analytical evidence that assess the necessity and/or sufficiency of political instability for SWF exhaustions.

Research Design: A Comprehensive Analysis of SWF Exhaustion

With the intention of bridging the political-economic divide in the literature of SWF exhaustion, I employ a fuzzy-set method in my medium-N study (Ragin, 2000, 2008; see also Bennett & Elman, 2008; Wagemann & Schneider, 2012). This case-oriented approach is suitable for the present analysis because of its ability to assert whether causal conditions alone or several in conjunction are *necessary* for SWFs exhaustions. That is, fuzzy sets identify 'enabling' conditions for the occurrence of an outcome (Ragin, 2008, pp. 111-112). Also, this approach tests all potential causal pathways and displays the combinations of conditions that are *sufficient* for the outcome. Importantly, this method does not attempt to estimate correlations and net effects of independent variables on dependent variables. Instead, fuzzy sets are 'most useful tools of discovery' for small-to-medium N studies through set-theoretic relations between conditions and outcomes—namely, if the proposed conditions are necessary and/or sufficient for an outcome (Mahoney & Goertz, 2012).

There are three reasons why this research method is suitable for understanding the mechanisms setting in motion funds' demise. First, the fuzzy-set approach 'offers tools for conducting a rich, discovery-oriented dialogue between ideas and evidence,' differing significantly from conventional assumptions in conventional correlational analyses (Ragin, 2000, p. 316). The extant 'ideas' seeking to explain funds' demise are regularly disconnected from each other. These ideas also lack theoretical (political camp) and empirical (economic camp) backing. What is required, then, is a method to harmonize such 'dialogue' and find the missing links, not only between the

two but also directly with SWF exhaustion. The nature of fuzzy sets is helpful to fulfill that requirement given its focus on outcome explanation rather than effect estimation (see Goertz & Mahoney, 2012, Ch. 3). Thus, fuzzy sets allow us to connect these dissociations and comprehensively discover the mechanisms leading to SWF exhaustion.

Moreover, unlike conventional variable-oriented research, case-oriented researchers think in terms of set-theoretic relations between conditions and outcomes (Schneider & Wagemann, 2012). Rather than emphasizing net effects of independent variables, fuzzy sets distinctively attempt to find the multiple conditions necessary for an outcome and the possibly sufficient paths for the outcome's occurrence—that is, assumptions of multiple conjunctural causation (Schneider & Wagemann, 2012, p. 77). For this analysis, this method clarifies whether political and/or economic factors enable the occurrence of SWF exhaustion, and which potential combinations of conditions lead to that outcome.

Finally, traditional problems that could arise in statistical, correlational approaches, such as multicollinearity, evaporate in fuzzy-set approaches (see Katz et al., 2005; Wagemann & Schneider, 2007; Ragin, 2008; Yamasaki & Rihoux, 2009, p. 141). Indeed, observers may stress that the political instability and economic crises 'variables' are 'inter-correlated,' resulting in spurious causation. Nevertheless, such concern, while critically important for correlational analyses, is not problematic for fuzzy sets. This method is not interested in clarifying which 'variable' is stronger but how 'different conditions combine and whether there is only one combination or several different combinations of conditions' able to generate the outcome (Ragin, 2008, pp. 113-114). Katz and co-authors have critically expressed that 'multicollinearity *does not stand in the way of fuzzy-set analysts reaching reliable results*' on set-theoretic statements of necessity and/or sufficiency (Katz et al, 2005, p. 569, emphasis added; see also Wagemann & Schneider, 2007).[1] Hence, having clarified how fuzzy sets work as a qualitative tool of discovery and addressed the possible concerns of logical causation, I now turn to specify the measurement, calibration, and conceptualization of the conditions and outcome.

For this qualitative tool, membership scores in a cause and an outcome capture the degree to which they belong in those conditions, and they can range from full non-membership (value of

[1] Katz et al emphasize that 'in fuzzy-set analysis, correlations among independent variables simply increase the likelihood that one will reach similar conclusions about the causal relevance of the correlated independent variables' (2005, pp. 568-569). Hence, if political instability and economic crises were highly correlated, then they would both have a similar (high) likelihood of being necessary and/or sufficient for the outcome. However, as the analysis in the next section shows, economic crises are neither necessary nor sufficient for the outcome, dismissing the claims that both could be intercorrelated. Specifically, in Appendix 6, it is tested indeed whether both conditions are each other complementary (e.g., 'inter-correlated'), or different (e.g., 'independent'), with the latter providing the most significant results and thus confirming the statement that they are not intercorrelated—even though it is not a problem in fuzzy-set approaches anyways.

0) to full membership (value of 1). The value of 0.5 is the threshold representing the point of maximum ambiguity, and it determines the crossover point at which conditions and outcomes are more present or absent in a specific case. I employ a fine-grained, 7-value fuzzy set that offers a more detailed classification of qualitative anchors that is required for a complex outcome like SWF exhaustion. Given that I test two macro-conditions combining numerous, specific factors into 'higher-order constructs' (e.g., political instability and economic crises), a granular fuzzy set would appropriately capture the diversity of cases belonging to different degrees of presence/absence in a cause and outcome (see Ragin, 2000, p. 321).[2] Besides the 1, 0.5, and 0 scores described, two additional qualitative anchors are added between the 0.5 threshold and cases with full membership and non-membership scores. Above the 0.5 threshold, cases can be 'mostly, but not fully' present (value of 0.83) or 'more or less' present (value of 0.67) in a condition. Conversely, below 0.5 exist cases where the conditions are 'mostly, but not fully' absent (value of 0.17) or 'more or less' absent (value of 0.33) (Ragin, 2000, pp. 155-157).

On top of calibrating the causal conditions and outcome, a critical requirement for a successful fuzzy-set analysis deals with defining concepts clearly. For purposes of streamlining the analysis, I offer general conceptualizations based on high (i.e., above the 0.5 threshold) and low (i.e., below the 0.5 threshold) levels of membership in the conditions, while a more detailed description can be found in Appendix 7. It is also important to note that cases are studied within the period their funds have been operational. For instance, Mauritania's NFHR was established in 2006, so the analysis of Mauritania's instability and economic crises runs from 2006 until 2019, the last year in my dataset. Chad's FFG was established in 2003 and abolished in 2007, so this case would cover only those five years.

SWF Exhaustion

The fact that the academic community has not come up with clear concepts on the juncture at which SWFs can be considered inoperable and exhausted is troublesome but allows for the development of a new concept in the SWF literature. There are clear-cut cases where funds have been completely abolished (Ecuador's SWFs scheme, Chad's FFG, and PNG's MRSF) (see Ossowski et al., 2008; Truman, 2010). Yet, there are other SWFs where AUM have sharply declined to extremely low levels without signs of recovery or re-capitalization of the fund in subsequent

[2] While having only two conditions may seem low, the expansive theoretical and empirical background of these well-developed factors in the literature are in fact positive for the goal of the fuzzy sets which is to clarify complex situations in a diverse universe of cases. Moreover, having two 'macrovariables,' or higher orders, prevents the disadvantage that comes with adding too many variables on the model, as the evidence would lose theoretical interpretation and make our simplification efforts utterly complex (see Schneider & Wagemann, 2006, p. 7).

years. While those funds could still exist legally, the fact that leaders completely drained the assets in the funds and became incapable of re-funding them raises concerns about the fund's operability. Indeed, given that a fund's assets have hit zero without signs of near-term capital recovery, those situations can be conceptualized as instances of SWF exhaustions. In that vein, there are cases that vary greatly in levels of AUM collapse, and their time and ability, if any, to recover. For instance, Colombia's FAEP (1995-2013) experienced a massive 82% decrease in AUM between 2007-2013, but its successor, FAE (2013-present), quickly outgrew FAEP and reached an all-time high in AUM of US$ 3.7bln 2017.[3] While Colombia technically consumed almost all the FAEP assets, the new FAE and its sizable growth clearly made up for previous FAEP's losses; hence, it would be misleading to talk about SWF exhaustion in the Colombian case. Other funds, like Botswana's Pula Fund, show a more constant decrease in AUM yet in unalarming amounts. Between 2011 and 2019, the Pula Fund experienced a sustained 28% reduction in AUM, which results in an average of 2.8% per year. Therefore, for constructing a definition of SWF exhaustion, it is vital to consider (1) the magnitude of the reduction; (2) the time of capital recovery (if any); and (3) the breadth of asset recovery following reductions in AUM.[4]

Data on SWFs' AUM was primarily retrieved from SWFs' annual statements, and reports from IE University's Sovereign Wealth project, Bocconi University's Sovereign Investment Lab, and the IMF. For a case to receive a high fuzzy-set score in the 'SWF exhaustion' outcome, the combined funds in that country must have experienced a sharp reduction of more than 50% in AUM compared to the previous peaks, been unable to recover at least 20% of the value of AUM lost, and either oscillated at those low levels or remained unfunded subsequently. In other words, for a country to experience SWF exhaustion, the funds' capital must have decreased by substantial terms, shown difficulty or inability recovering a significant portion of lost assets *and* maintained those depressed levels for subsequent years. Broadly, these three components must be present to assess whether cases belong to the full exhaustion (value of 1), almost full exhaustion (value of 0.83), and more or less exhausted (0.67) qualitative anchors (see Appendix 7).

Below the 0.5 threshold lie cases of funds that have been more resilient. Sovereign funds that have experienced minor decreases in assets (i.e., drops of 20% from the previous peak) *and*

[3] It is important to understand that if a country has more than one SWF, the analysis does not differentiate between types of funds. It takes the combined assets of the funds during the periods they are operational. The example of Colombia's FAEP (1995-2013) and FAE (2013-present) analyzes Colombia as if it had just one SWF from 1995 until the present. Between 2008 and 2017, when the RF was depleted, Russia had legally three separate funds (RF, NWF, and RDIF), but the analysis takes the combined AUM for the three funds to assess whether there has been SWF exhaustion. Separating the funds would be misguided as, for example, it would have counted Colombia in 2013 and Russia in 2017 as cases of exhaustion, even though they still had SWFs with even a larger number of capital available to them.

[4] More information about the cases and data can be found on the online appendix

have re-capitalized the fund obtained low (value of 0.17) or extremely low (value of 0) scores in SWF exhaustion. Cases of SWFs where the breadth of the asset reduction has been moderate at around 10%-40% *but* recovered subsequently show a 'more or less' resilient fund (value of 0.33).

Political Instability

In the SWF literature, the political camp has consistently referred to short-term pressures and political incentives for leaders to tap into SWFs in a way that is unsustainable and incompatible with the funds' objectives (Truman, 2010; Bernstein et al., 2013). While there are no comprehensive studies that explain SWF exhaustions, the political arguments can be aggregated into one 'macro-condition' portraying the levels of political (in)stability in a country. Countries with higher stability demonstrate higher levels of institutionalization and political procedures that almost always translate into low levels of uncertainty for the regime (Gates et al., 2006). By contrast, instability arises from a sustained environment of conflict between political and social actors, and weaker formal and informal institutional arrangements. Such instability-ridden context clouds long-term thinking as short-term challenges exert pressure on the ruling coalition's governance and survival (Knutsen & Nygård, 2015). Therefore, whether leaders face short- or long-term prospects for governance and survival matters for SWF exhaustion or resiliency.

I measure instability by the frequency and severity of actual and potential challenges to the regime. These threats come mostly from vertical and horizontal confrontations, as these have become the most common and frequent sources of political instability (Goldstone et al., 2010, p. 191). Thus, instability captures a broad range of indicators, along with events of political violence (e.g., civil wars, guerrilla activities, or revolutions), that, while imperfect, 'are important manifestations of political instability' (Blanco & Grier, 2009, p. 78). The data on events of instability was obtained from a combination of international and local journalistic sources, cross-country reports (Freedom House, V-Dem, Polity-IV), policy institutes (Carnegie Endowment for Democracy, International Crisis Group, Center for Strategic & International Studies), local and regional policy institutes, and academic sources.

Cases with a high membership in the political instability condition generally display a high frequency *and* high severity of vertical and horizontal challenges. These include the constant occurrence of large-scale anti-government demonstrations, mass strikes, and riots, as well electoral rebellions and challenges that credibly threaten to weaken the regime's governance and survival. Moreover, immediate or prologued disputes between government institutions (such as parliament

and executive branches), inner-circle purges or chaotic government turnover and reconfigurations, and ultimately coups also fuel horizontal instability. A government involved in constant, sometimes violent, clashes with strong opposition *and* experiencing institutional impasses along with low levels of government unity will show a high membership in the category of political instability, such as PNG in the 1990s. Countries with relatively moderate instability (value of 0.67) are those where there is a growing environment of instability from either vertical *or* horizontal threats, or a combination of both, that existing institutions have had difficulty weathering, as in Peru's disorderly democracy.

Regimes below the 0.5 threshold of political instability are those where formal and informal institutions and procedures are strong enough to contain or mitigate the effects of less likely and less impactful vertical and horizontal challenges. The most obvious cases are consolidated dictatorships (e.g., China, Qatar, or Kuwait) and democracies (Norway, South Korea, or Australia), where regimes are very stable. More ambiguous yet still unstable cases are those where vertical and horizontal challenges are likely to materialize and have a moderate impact, mainly on the regime's governance rather than survival, and where institutions usually cope well with dissipating these risks, as in Vladimir Putin's Russia in the 2000s and early 2010s.

Economic Crises

Economic factors have been identified as possible instigators of SWF exhaustion. The literature mostly focuses on the detrimental effects that fiscal deficits have on SWFs (Délechat et al., 2017); the impact of external shocks, such as oil price collapses (Aguilera et al., 2016, pp. 16-17); and adverse economic conditions, such as unsustainable indebtedness or countercyclical fiscal policies (Carpantier & Vermuelen, 2021, pp. 16-18). Conforming to logical thinking and well-established theories, the proposition that negative or worsening economic indicators drive leaders to draw down resources in SWFs is highly plausible. Thus, the variable 'economic crises' is constructed to denote a dire economic context that should motivate leaders to use the capital in the funds to improve the country's economic performance. Indeed, countries under the worst possible economic scenarios—that is, suffering from economic recessions, extremely high levels of inflation, growing debt, increasing unsustainable fiscal deficits, and/or worsening socioeconomic indicators—should, by this logic, consume most of their funds' assets for the sake of economic performance.

The economic crisis condition is constructed from a composite of indicators, like GDP growth, inflation, unemployment, fiscal balance, and debt levels. It incorporates the basic gauges of economic crises (GDP and inflation) and considers the fiscal and debt factors cited by other authors, as well as unemployment levels. Thus, countries have undergone economic crises if GDP growth has been negative for over two quarters, extremely high levels of inflation or hyperinflation ensue (≥50% monthly), and/or the fiscal and socioeconomic indicators show a worsening trend. Conversely, countries have low membership scores on the economic crises 'macro-condition' if their fiscal and socioeconomic indicators show a moderately healthy trend (e.g., low to medium levels of indebtedness, manageable unemployment) and either a booming or slow-growing economies with low to moderate levels of inflation. For example, Angola scores high in the 'economic crises' condition because, since the inception of its FSA in 2012 until 2019, has experienced six recessions, faced yearly consumer prices skyrocket from 7% in mid 2012 to over 40% in late 2016, and seen debt-to-GDP ratio surpass 100% in 2019 from its 30% levels in 2012 (Trading Economics, n.d.). Conversely, relatively well-managed economies, like Malaysia's or Panama's, show much healthier indicators and belong below the 0.5 crossover point of non-crises economies.

Analytical Results: Necessary and Sufficient Conditions

I follow Ragin's well-established procedure of testing whether a combination of conditions is necessary and/or sufficient. The method first assesses the conditions' necessity for the outcome, followed by the sufficiency test. For the necessity test, it is vital to include only cases with *non-zero membership in the outcome*, and then report the proportion of cases where the causal-condition scores are equal to or higher than the outcome scores—in set-theoretic terms, where the outcome is a subset of the condition.[5] For sufficiency, only cases with *non-zero membership in the causal conditions* are excluded. Also, and different from the necessity test, the sufficiency evaluation reveals the proportion of cases where the outcome is equal to or higher than the causal conditions—in set-theoretic terms, where the condition is a subset of the outcome.

Then, to test the explanatory power of the possible causal combinations for a medium-N analysis, a binominal probabilistic test and criteria are employed (see Ragin, 2000; Mahoney & Goertz, 2012). We are interested in conditions that pass the significant probability benchmark of 0.8—indicating that a condition is 'almost always' necessary and/or sufficient for an outcome—

[5] Countries with a 0 in the 'SWF exhaustion' condition are not included for methodological reasons as they could inflate the number of cases and result in biased estimates. These 'negative cases' require a separate analysis of their own (see Ragin, 2000, pp. 275-278)

and a .05 significance level (Ragin, 2000, pp. 107-119).[6] Since a granular, 7-value fuzzy set was used, 'there are many opportunities for measurement and translation imprecisions' (Ragin, 2000, p. 272). Thus, to account for these imprecisions, I add an adjustment factor of one level in the fuzzy set value. For instance, in the raw necessity analysis, a case where the causal condition scores .33 but the outcome is .5 would count as a violation of necessity since the causal condition is less than the outcome (e.g., the outcome is not a subset of the causal condition). With the adjustment factor of one fuzzy-set level, the .33 score is *not* counted as a violation because it is only one fuzzy-set value below the outcome's score. However, if the causal condition score is .17, it would count as a violation even with the adjustment applied. The results of the necessity test are shown in Table 1.

[Table 1 here]

As expected, no single causal condition passes the necessity test *without* the adjustment factor of one fuzzy-set value that accounts for measurement errors and imprecisions. With the adjustment, the results show that only one causal condition, political instability, covers a greater proportion of cases (.92). Using the binominal probabilistic assessment of the number of cases and successes yields a significant level (.04). Indeed, the .92 proportion is above the advisable .90 for necessary conditions, which helps 'reduce the likelihood of true logical contradictions' (Schneider & Wagemann, 2012, p. 143). By contrast, even with the adjustment, the economic condition's result deems it as 'more or less' necessary for SWF exhaustion, in effect dismissing the claim of interest that economic crisis is 'almost always' necessary for the occurrence of SWF depletion. In sum, from Table 1, we can infer that political instability is the only causal condition 'almost always' necessary for SWF exhaustion.

While the necessity test shows that political instability will be nearly always present for SWFs to go bust, is it by itself, or in combination with economic crises, sufficient to cause funds' demise? The sufficiency assessment is carried out similarly to the necessity one; with the difference that scores on the outcome must be equal to or greater than the causal condition to be considered sufficient. Table 2 reports the sufficiency results.

[Table 2 here]

[6] The tests also show results for other probability benchmarks if they fail to pass the 0.8 benchmark. However, only those conditions and combinations that pass the probability assessment at the 0.8 benchmark and a significance .05 alpha level are considered significant('almost always' necessary/sufficient) and valid for further explanation.

Focusing on the adjusted proportion of cases, and interested in multiple conjunctural causation, we see that the following two combinations are sufficient and significant:

(1) Political Instability • Economic Crisis
(2) Political Instability • ~ Economic Crisis

The results show that there are two possible sufficient combinations for SWF exhaustions. Expression (1) indicates that the presence of political instability *and* economic crises in conjunction cause SWF exhaustions. This is highly plausible as the combination of these events can drastically shorten leaders' political time horizons and their ability to govern and survive in power. Nevertheless, expression (2) demonstrates another causal path towards SWF demise: the presence of political instability *even in the absence of* economic crises. Put another way, political factors threatening the governance and survival of a regime will incentivize incumbents to empty the fund, even under favorable economic conditions. Hence, even if expression (1) is initially assessed as lending support for the causal power of economic crises, it is nevertheless *only in conjunction with political instability* (e.g., absent political instability *and* present economic crises, the latter is highly unlikely to bust SWFs). This is also reflected in the significance of expression (2).

Fortunately, fuzzy sets can address this by using logical Boolean minimization (Ragin, 2000). Accordingly, if two causal expressions differ in only one condition—in this case, the presence and absence of economic crises—then 'the logically redundant condition can be omitted, and the two rows can be merged into a simpler sufficient conjunction of conditions' (Schneider & Wagemann, 2012, p. 105). Hence, both the presence and absence of economic crises cancel each other out and become contained in the singular, simplified expression 'Political Instability.' By further testing political instability by itself (Row 1), the results demonstrate that the expression 'political instability' is indeed also 'almost always' sufficient for SWF exhaustion.[7]

The combination of both results illustrates that (1) SWF exhaustion is almost always preceded by political instability, and (2) the presence of such instability, irrespective of economic crises, will almost always lead to SWF exhaustion. Figure 2 offers a graphical distribution of the cases. Cases within the dashed and dotted lines—which represent the adjustment factors for necessity and sufficiency, respectively—illustrate that SWF resiliency or demise is affected by

[7] See Appendix 6 for additional test that confirms this. There, the reader will find that political instability and economic crises are in fact not complementary and instead only the presence of one of them will be necessary and/or sufficient for the outcome to occur—evaporating the multicollinearity problem (see Katz et al., 2005).

political (in)stability. Cases in italics at the bottom represent negative cases (see Conclusion and Discussion section; see also Appendix 5).

[Figure 2 here]

Equipped with these analytical results, the following section corroborates the evidence with a comparative case analysis (see Odell, 2004). How, specifically, do leaders in politically unstable environments defund and exhaust their special-purpose funds? And, just as importantly, how does greater stability limit incumbents' motivations and capacity to utterly empty their SWFs, notwithstanding economic hardship? A comparative analysis of Venezuela's FIEM (1998-2003) and FONDEN (2005-2014) and Azerbaijan's SOFAZ (1999-present) substantiates how (in)stability influenced leaders' incentives and capabilities to fully consume the assets in those funds. The case selection is justified, first, to illustrate how a perennial environment of political instability leads SWFs to go bust (Venezuela), while a growing environment of stability and certainty discourages short-termism and funds' exhaustions (Azerbaijan). Moreover, their similarity in economic dependency on hydrocarbons (see Ross, 2012, Ch. 2), the time of creation of their first funds (both in the late 1990s), and the coincidence of politically unstable events (i.e., 2000-2005) in a borderline democracy reverting to competitive autocracy (Venezuela) and to consolidating hegemonic autocracy (Azerbaijan) allows us to nicely capture the influence of (in)stability. Finally, Azerbaijan's SOFAZ and Venezuela's FIEM and FONDEN account for similar legal and operational structures (see Hammer et al., 2008). The three funds were created via executive decrees as opposed to legislative law. Moreover, SOFAZ and FONDEN were created as separate legal entities and FIEM as a fund attached to the Venezuelan central bank—which since 1999 has had little to no independence from the executive. In practice, their operational similarities are even more striking; SOFAZ "is accountable and bears responsibility before" Azerbaijan's president who appoints and removes the fund's manager (SOFAZ, n. d.). Similarly, FONDEN (*de jure*) and FIEM (*de facto*) were operationally managed by and accountable to Venezuela's president (Palma 2011; Bruce-Clark & Monk, 2017). The governance and operational resemblances permit us to further isolate political instability's influence on funds' exhaustions.

In sum, the Venezuelan case exhibits a politically unstable and intensely uncertain context in which FIEM and FONDEN operated and were, in line with our theory, utterly drained. In contrast, Azerbaijan represents a hegemonic autocracy that consolidated early on, strongly stamping out destabilizing threats from the outset and achieving remarkable security. The stable Azerbaijani

context enabled the long-term, financial-oriented strategy that made SOFAZ resilient even in the face of economic uncertainty.

Venezuela: The FIEM and FONDEN

Venezuela created its first SWF, the Investment and Macroeconomic Stabilization Fund (FIEM), in 1998. The fund was intended to be a classic stabilization and savings fund to prevent the resource curse's negative economic effects given Venezuela's extreme dependency on oil (Clemente et al., 2002). The fund's assets, which peaked in 2001 at over US$ 6bln, would serve as a buffer against economic shocks—following years of chronic fiscal mismanagement (see Hausmann & Rodriguez, 2014)—and preserve the national wealth's long-term purchasing power.

However, the victory of populist Hugo Chávez in 1998 as Venezuela's president signified the suffocation of already weakening democratic rule and sustained an autocratization process in what was once deemed one of Latin America's most stable and durable democracies (Brewer-Carías, 2010). From early on, the Venezuelan opposition and regime insiders posed serious electoral and extra-institutional challenges to Chávez's Bolivarian project—such as a coup attempt in 2002, mass protests and strikes, significant electoral contests and mobilization strategies for elections and referendums—exacerbating both vertical and horizontal threats. The high levels of political instability (Weyland, 2020) played a determinant role in creating the conditions under which Venezuela's FIEM, and its successor FONDEN, disappeared.

Immediately after taking office, Chávez disregarded FIEM's dual stabilization and savings mandates by changing its rules to enable greater discretion over its assets (Kumar et al., 2016, p. 16). Chávez tapped into FIEM's assets as one of his strategies to placate the population through better economic performances and ride out the 2002-2005 vertical and horizontal challenges from the 2002 coup and intense street mobilizations. Given the massive amounts of withdrawals for political motives, FIEM was utterly exhausted in 2003 as its assets shrank from a US$ 6bln peak in 2001 to US$ 0.7bln (Márquez-Velazquez, 2019, p. 3; *ProEconomía,* n.d.).

To buffer against continuing regime-threatening challenges, Chávez created another SWF in 2005, the National Development Fund (FONDEN). The fund's objectives and investment strategies were fundamentally different from FIEM, as FONDEN had a development mandate to invest domestically in social projects, infrastructure, and economic diversification (Bruce-Clark & Monk, 2017). Yet, as the evidence suggests and FIEM's demise manifested, the presence of instability and uncertainty, especially in borderline democracies reverting to unstable (competitive) authoritarianism, will make any SWF short-lived. Indeed, Chávez, and his hand-picked successor, Nicolás

Maduro, did not hesitate to bust FONDEN to weather vertical threats and inner-circle uncertainties.

For instance, the capital in FONDEN was used to buy the electorate and the military's support as elections became more highly unfair and opposition mobilizations continued. Indispensably, to wear off existing internal threats and uncertainties, the fund's assets served to consolidate an initially weak political and military network of patronage that tightened the ruling elite's unity (see Tian & Lopes da Silva, 2019; Corrales & Penfold 2011, p. 60; Morgan, 2018, pp. 307-308). Put simply, the politically unstable context 'introduced short run pressures to financially support a wide array of bad structured and inefficient projects' helping the regime survive (Vera, 2015, pp. 564-565), for which FONDEN was key. The series of unstable events, as expected, shortened the incumbents' time horizons, driving them to utilize funds' capital to reduce the impact of political challenges to their rule.

Once Maduro rose to power in 2013, instability and uncertainty intensified, as is common in authoritarian succession in unstable competitive autocracies (see Geddes, 2018, Ch. 8). This meant that Maduro had to double down on the withdrawals from the fund to withstand intensifying political uncertainty. Indeed, the continued instability and uncertainty engulfed Venezuela in the early 2010s, paving the way to perennial short-termism in Maduro's mismanagement of FONDEN. The overall mishandling had a catastrophic impact on the fund: Between 2005 and 2014, FONDEN managed an estimated aggregate of over US$ 140bln in AUM, but the fund's resources were mostly—and, critically for exhaustion, remain to this point—exhausted in 2014 at around US$ 1-3bln after a peak of US$ 20bln in 2012 (Márquez-Velazquez, 2019; *Transparencia Venezuela,* 2021).

In short, the reigning instability incessantly challenging the Bolivarian regime led to a perennial state of short-termism leading to the depletion of FIEM and FONDEN. Chávez achieved power (1999) in a highly unstable and weak 'borderline' democracy where institutions were exceptionally weak to halt Chávez's authoritarianism. In the risky and wobbly reversion from borderline democracy to competitive authoritarianism, Chávez faced recurring and reinforcing dynamics of instability as his government experienced coup attempts, anti-government demonstrations, electoral challenges, and potential internal threats from still underdeveloped civil-military networks of patronage and corruption schemes. The funds' massive capital aided Chávez in weathering these vertical and horizontal challenges. Under Maduro, continued uncertainty from fears of intensified instability and regime breakdown—again, typical in shaky competitive autocracies—

led to the quick and utter exhaustion of FONDEN as part of a strategy to minimize the impact of these credible, regime-threatening challenges. In short, the highly unstable domestic political reality of Venezuela between 1999 and 2014 induced Chávez and Maduro to *wholly deplet*e FIEM and FONDEN.

Azerbaijan's State Oil Fund (SOFAZ): Political Stability and Fund Resiliency (1999-2019)

Azerbaijan's State Oil Fund (SOFAZ) was created in 1999 with stabilization and savings objectives and has recently supported development projects (Aslanli, 2015). Considering Azerbaijan's dependency on hydrocarbons, almost all the fund's revenues come from oil and gas exports (96%), (Aslanli, 2015, pp. 117-118). While critics have raised concerns about SOFAZ's mismanagement, the fund has only recorded one period of asset reductions by 11% since inception, corresponding to the 2014-2016 oil price debacle (see Appendix 1). However, this decline was very small, and SOFAZ's overall AUM have skyrocketed from US$ 0.5bln in 2001 to US$ 43.3bln in 2019 (SOFAZ, 2002, 2020). While the fund's size could have grown larger had it not been for fiscal mismanagement and corruption, SOFAZ has not experienced any symptoms or meaningful signs of exhaustion in 20 years. As will be demonstrated, the fund's resiliency has more to do with Azerbaijan's stable hegemonic autocracy, led by Ilham Aliyev, than with economic factors or oil booms and busts.

A critical juncture leading to the establishment of a stable autocracy in Azerbaijan dates to the chaotic 1990s marred by the Karabakh conflict with Armenia, a dire economic situation, internal turmoil within the government, and ethnic conflicts (Franke et al., 2009, p. 117). The country's population sought someone who could bring about stability. Heydar Aliyev, a former communist official in Soviet Azerbaijan, took it upon himself and his New Azerbaijan Party (YAP) to ensure stability, but at the expense of democratic rule. Undoubtedly, Aliyev's return 'meant stability,' but this included 'reestablishing the old Soviet-era system, including [the Soviet's] standard operating procedures for elections' (Altstadt, 2017, p. 71; see also Ergun, 2010, pp. 68-69). However, Aliyev's poor health prevented him from ruling beyond 2003, when he died. Before passing away, he chose his son, Ilham Aliyev, to succeed him as president.

Ilham Aliyev faced a bumpy start succeeding his father, since a leader's succession is a 'perennial threat of authoritarian instability' (Svolik, 2012, p. 198). Aliyev feared that instability could quickly result mainly from the possibility of electoral protests and rebellions, as well as Color Revolution-like protests (Ergun, 2010, pp. 74-75). However, he was swiftly embraced by his father's inner circle, and, critically, (horizontal) regime fractures did not ensue. Aliyev's most

challenging times occurred in the aftermath of the 2003 presidential election and 2005 parliamentary election (Hess, 2016). A marginalized opposition protested the manipulation of the elections and mobilized sizable groups to demand a fair electoral process and democratic governance. Nonetheless, Aliyev's regime tackled these pressing situations by resorting to well-grounded practices of autocratic stability: repression and manipulation that quickly dissipated the protests. Predictably, the post-2005 Aliyev regime became much more 'vigilant,' [tending] to [quickly and preemptively] put down potential threats (Altstadt, 2017, p. 236), which ultimately led to 'a notably stable hegemonic authoritarian regime in Azerbaijan' (LaPorte, 2015, p. 358).

Consistent with the evidence for SWF resiliency, Azerbaijan's low uncertainty and prolonged time horizons help us understand why there have been almost no instances or signs of serious diminutions in SOFAZ's assets. Indeed, these findings defy experts' views claiming that economic factors would lead to the depletion of SOFAZ. Critics in the economic camp challenged SOFAZ's resiliency given its unsustainable, massive contributions to the government budget to maintain high levels of spending with little oversight (Altstadt, 2017, pp. 114-115; Aslanli, 2015), and unsuccessful use for economic diversification (Yücesoy, 2013). Other analysts even defined the 2014-2016 oil price collapse as a 'game changer' for Azerbaijan, relying on economic factors and indices that questioned SOFAZ's endurance, the government's ability to fund it, and its eventual depletion (Altstadt, 2017, p. 221; see also de Waal, 2016). But economic hardship is rarely consequential for SWF exhaustion. Instead, while political instability is almost always a necessary and sufficient cause, it has been notably absent in Azerbaijan's hegemonic autocracy.

In fact, contrary to the economic argument of funds' exhaustions, SOFAZ has experienced remarkable resiliency and made decent strides in investments (see Balding, 2012, pp. 187-192). One analyst contends that 'SOFAZ has performed well in managing windfall revenue, smoothing out the adverse effects of oil, and enabling the chief executive to increase government spending, including on public infrastructure expenditure' (Guliyev, 2013, p. 116). Moreover, while the fund's investments have not generated enough financial returns to compensate for increased public expenditures (Aslanli, 2015, pp. 118-119)**,** the initial low-risk investment strategy—mostly in fixed income instruments—served 'to preserve the real value of its assets even in the short to medium term' (Luecke, 2011, p. 52). Furthermore, to counteract underperforming investments, SOFAZ's managers have gradually allocated more capital into riskier investments, as SOFAZ's equity portfolio share increased from 0.1% in 2007 to 14.1% in 2019 (SOFAZ, 2008, 2020). These

strategies require patience and resolve from the Aliyev regime, and Azerbaijan's domestic political stability in the past years have offered those attributes.

In sum, domestic political stability in Azerbaijan has shaped an environment where SOFAZ's assets are protected from short-term political pressures, and it has limited Aliyev and his cronies' motivations to utterly deplete the fund. Absent political instability, SOFAZ could operate in a setting characterized by longer time horizons, which are compatible with sovereign funds' financial nature.

In comparing Venezuela and Azerbaijan, it is notable the way in which the presence of (in)stability played out in countries that share similar economic structures and should have been similarly affected by different oil shocks and economic crises. On the one hand, we can expect the weakest and most vulnerable regimes to exhaust their funds at times when vertical and horizontal challenges intensify and threaten the regime's governance and survival prospects. The Venezuelan case shows how an unstable democracy reverting to authoritarianism faced recurring political uncertainties that motivated Chávez and Maduro to exhaust the capital in FIEM and FONDEN—funds that became exhausted because they *never recovered* from those debacles. On the other hand, more consolidated regimes, enjoying higher levels of stability, are less likely to deplete their SWFs as longer time horizons enable a suitable environment for SWFs to survive. Azerbaijan's hegemonic autocracy has kept the opposition weak and divided while its inner circle has remained loyal and united, creating a highly stable domestic political environment that supports the long-term financial strategy of SOFAZ. In brief, chaos, instability, and political crises in a country are incompatible with SWFs. Such uncertain contexts facilitate the conditions for leaders to drain SWFs' assets to weather political threats and, in the process, drive the funds bust.

Conclusion and Discussion

This investigation shows how political factors are more consequential for SWF exhaustion than economic ones. On the one hand, as the empirical evidence suggests, SWFs are more likely to be exhausted in weaker and less institutionalized regimes because these are usually marred by domestic political instability that challenges leaders' survival and governance. As vertical and horizontal threats shorten incumbents' political time horizons—driving them to tap into funds' assets to weather these recurrent events—SWFs in highly unstable and vulnerable regimes are generally easily depleted and unlikely to recover from those debacles.

On the other hand, more consolidated regimes enjoy longer political time horizons given their well-established institutional procedures and rules, as well as the low levels of credible vertical and horizontal challenges. In such settings, ruling coalitions can focus on other non-political objectives that are more compatible with the long-term financial nature of successful SWFs. The argument that political instability instigates SWF exhaustion is backed by the necessity/sufficiency test using the fuzzy-set method. Hence, when funds go bust and fail to recover, political conditions are almost always behind the explanations for such unpleasant outcome. Conversely, economic factors, while logically apt for explaining ups and downs in funds' AUM, offer little explanatory and empirical insights into the mechanisms behind SWF exhaustion.

These findings contribute to the specific literature on SWFs by extending the study of SWFs beyond puzzles dealing with funds' establishments and capital allocation. The paper completes the SWF lifecycle by analyzing the factors driving their demise and their causal mechanisms, which were evidently absent in the SWF scholarship. While researchers have attempted to, rather abstractly, show how economic or political factors could determine the fate of SWFs, this analysis bridges those gaps by taking both arguments and testing whether they are necessary and/or sufficient for SWF exhaustions. This article offers theoretical, analytical, and empirical evidence to the incomplete analysis of political determinants of SWF depletion. It also challenges the views of observers who prime economic determinants. Economic crises are obviously important, but they are far from consequential in explaining SWF exhaustion. In brief, the theoretical explanation configuring how political (in)stability in different regime types affects their political time horizons, the larger empirical evidence from over 30 diverse cases, and the analytical results posit novel conclusions for the political economy of SWFs.

The paper also advances the broader IPE literature by demonstrating the minimal impact and risks that SWFs' exhaustions have on other economies, let alone the global economic system. If we summed the total assets held by SWFs at peak years *only* for cases above the 0.5 threshold for the SWF exhaustion *and* political instability combination—that is, countries with high domestic political instability at home that would be more likely to suddenly pull away foreign assets (see Appendix 4)—we obtain a total of US$ 0.47trn. This number only covers 9% of the average US$ 5trn held by all SWFs between 2008 and 2019 (Preqin 2015, 2021), and about 3% of the US and EU's GDP in the same period. Hence, if we assume that all the assets of SWFs in politically unstable contexts were invested abroad, then even if all uncertainty-ridden sovereign sponsors were to pull out all their capital from recipient states, the impact would be correspondingly minimal.

Simply, the financial power of 'risky' funds operating in uncertain environments is insufficient to shake the global economy.

In that same vein, it is SWFs from Norway, China, Kuwait, Singapore, Saudi Arabia, Qatar, and the UAE—which comprise about 75% of AUM in all SWFs—'that have the potential to be market movers at the global level' (Helleiner & Lunblad, 2008, p. 68). But, knowing that it is extremely unlikely for these countries to pull out their foreign savings for domestic instability motives, financial risks from sudden disinvestments can be ruled out as a source of concern. As Bahgat signaled over a decade ago, 'legitimate caution about SWFs could easily spill over into illegitimate hysteria' (2008, p. 1204); thus, judging from the limited impact that sovereign sponsors' domestic instability could have on foreign markets, there should be little reason to fear that sudden capital withdrawals could pose risks to recipient states.

In the future, as more countries consider setting up SWFs (Capapé, 2020, p. 100; Braunstein, 2022, pp. 125-126), analyzing the domestic political sources of resiliency and instability for SWFs will remain imperative. This is especially true given that relatively young SWFs, like Suriname's SSF (2017), Guyana's NRF (2019), the Egypt Fund (2018), and the 2016 Turkey Wealth Fund (TVF), operate in unstable domestic political environments.

In line with the fuzzy-set approach, an exciting avenue of studies would analyze cases in my dataset with zero membership in the SWF exhaustion outcome and nonzero membership in the causal conditions (China, Norway, Panama, Turkey, Trinidad & Tobago, among others; see Appendix 5) (Ragin, 2000, pp. 207-209, 276; see Mahoney & Goertz, 2004). Researchers could take the most interesting negative cases and study the mechanisms of (in)stability that are linked to the general resiliency of these SWFs.

Another promising research project would be to dive into whether funds' institutional design has any effect on SWF mismanagement. This paper shows how political factors, specifically regimes and incumbents' domestic context, influence their calculations on whether to deplete their funds. It will be helpful for continuing the discussion on SWF exhaustions to assess whether and how funds' institutional arrangements and mandates, while in theory influence asset allocation and investment horizons (see Gilson & Milhaupt, 2008; Al-Hassan et al., 2013; Braunstein, 2022, Ch. 1), constrain or enable managers' choices for depletion and inability to recapitalize it. Researchers could also look within political instability and test—perhaps aided with correlational, quantitative methods—which of the vertical and horizontal threats have on average a major impact on influencing leaders' decisions to empty their funds.

In brief, as more countries consider setting up their own SWFs, scholars and policymakers must grasp that a critical enabler of a durable SWF is to foster a stable and predictable political environment. The contrary will doom any SWF in conflict-ridden settings to its announced demise.

Moreover, the politics of SWFs will remain important in the next decade. Some analysts have concluded that, while 'the golden age of SWFs is over,' we can expect 'SWFs [to] remain major players in global finance' (Bortolotti et al., 2020, p. 14), given their sizable and growing capital accumulation. The COVID 19 pandemic presented a global economic crisis that strained all SWFs (see Braunstein, 2022, pp. 150-155). However, in line with this paper's argument, economic crises alone rarely induce SWF exhaustions. Indeed, while the economic downturn pushed many governments to rely on these funds for recovery, as expected, most of them are already recapitalizing them (Global SWF, 2022), which dissipates the economic-driven fears of SWF exhaustions post-COVID 19. Having said that, it remains unclear whether the disruption and destabilization of the global economy from the pandemic's lingering effects and the Russian invasion of Ukraine *could potentially affect* the future resiliency of SWFs (IMF, 2022). Only time will tell.

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