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When do Autocrats Create Sovereign Wealth Funds?

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Abstract

The recent proliferation of Sovereign Wealth Funds (SWFs) in authoritarian regimes is puzzling. While SWFs can generate political, financial, and geopolitical benefits in the long-term, their creation also sharply impedes an autocrat's ability to fund current patronage and other regime-stabilizing public and private goods. What explains the creation of autocratic SWFs? We argue that sovereign wealth funds are more likely to emerge when autocratic leaders possess a high degree of policy-making autonomy. Policy-making autonomy allows leaders to override any opposition from regime insiders who might prefer to keep capital at home and available for patronage. At the same time, such leaders are more politically secure, and thus are more confident that they will remain in power to reap the medium to long-term financial rewards of these funds. We operationalize this concept with indicators that measure whether an autocrat has consolidated their authority over the regime's party infrastructure and employ survival analysis on a global sample of autocratic regimes from 1960–2010. We find robust support for our argument and describe how our findings provide new insights on the political determinants of sovereign wealth funds and the consequences of authoritarian power-sharing institutions.

Keywords

sovereign wealth funds, autocratic regimes, political economy

Introduction

Sovereign Wealth Funds (SWFs) have spread throughout the international system. The world's first, the Kuwait Investment Authority, was established in the early 1950s. To date, roughly one quarter of all states operate a SWF, and these funds have emerged as important actors in the global economy. This trend remains puzzling. SWFs represent a case of governments investing public wealth primarily in private markets across borders, even though the usual business of states is not commercial investing or the corresponding risk entailed. Creating a SWF also carries steep opportunity costs for governments. As Shields and Villafuerte (2010, 43) note, "… few decisions can be more significant – politically or economically – than to choose to accumulate financial assets when … citizens still have large unmet needs. Every dollar that a government saves [in a SWF] is money that some may believe would have been better spent on social welfare or infrastructure, or taxes that need not have been levied."

Autocratic leaders have emerged as key sponsors of SWFs in recent decades, and they currently create them at higher rates than their democratic counterparts (Carpantier and Vermeulen, 2018). This surge is surprising given the risks involved. By construction, SWFs direct public resources into cross-border investments which typically generate benefits only at some point in the future. For autocrats, creating a SWF deliberately limits their ability to fund immediate and potentially more beneficial tools of regime survival, such as boosting spending on military and security forces, funding patronage to regime insiders, or even providing broader public goods. While all leaders face tradeoffs when considering a SWF, the financial and political risks are particularly acute for dictators. Nevertheless, the pace of SWF creation among autocrats has increased in recent decades, and the amount of assets controlled by such funds has soared. The SWF operated by the United Arab Emirates, for instance, is estimated to manage

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between $800 and $875 billion (Economist, 2008; Economist, 2019). China's SWF reportedly controlled $940 billion in 2018 (CIC, 2018). Even comparatively modest autocratic SWFs control considerable volumes of capital; Libya's SWF is estimated to manage roughly $70 billion in assets (IFSWF, 2020), while Iran's fund is reportedly valued at $91 billion (SWF Institute, 2020).

What accounts for this pattern of autocratic SWF creation? Despite the risks, we argue that SWFs have the potential to confer important domestic and international benefits for autocratic leaders. At the same time, however, SWFs are controversial policy choices and often face considerable resistance from regime insiders. Whether autocratic leaders can overcome this internal opposition hinges on the degree to which they enjoy a high degree of *policy-making autonomy*. Such leaders are less encumbered by competing forces in the policy arena, less likely to encounter credible internal resistance to their policy agenda, and can afford to devote fewer public resources to building and maintaining a political coalition. Additionally, leaders who control the policy-making process enjoy higher degrees of political security, and can thus afford to craft policies aimed at yielding benefits in the medium to distant future. We expect such leaders to be considerably more likely to create a SWF.

We measure our concept of *policy-making autonomy* with recent data from Geddes, Wright, and Frantz (2018) on the degree to which autocratic leaders have consolidated power over their regime's party infrastructure. Event history analysis of a global sample of autocracies from 1960 to 2010 supports our argument, and the results are robust to a wide array of changes to our measurement and modeling choices. We conclude by reflecting on our findings' contributions to research exploring the determinants of SWFs and the politics of resource distribution, regime survival, and institutional design in autocracies.

The Puzzle of Autocratic SWF Creation

Autocratic leaders have become increasingly likely to create Sovereign Wealth Funds in recent decades. Today, roughly half of all funds in existence are operated by autocracies. This trend is puzzling for several reasons. First, many theories of autocratic regime survival emphasize the distribution of private goods for building and maintaining support coalitions (e.g. Bueno de Mesquita et al., 2003). Directing public wealth to a SWF precludes the possibility of using those funds in this fashion. Moreover, the majority of SWFs are constituted as medium to long-term investment vehicles (Baghat, 2008; Klitzing et al., 2010), and are thus seldom expected to offer benefits in the immediate future. Even funds established with shorter time horizons are typically comprised of securities and other assets that are less liquid than alternatives like cash reserves. Tying up wealth in a SWF represents a risky tradeoff for dictators since autocrats' control over and distribution of rents tends to preserve their time in power (Wright, Frantz, and Geddes, 2015), and given that the vast majority of leader removals occur via coup or other insider-led processes (Svolik, 2012, 112; Kendall-Taylor and Frantz, 2014, 36).

Second, sovereign wealth funds curtail resources for public goods. Though once assumed to be exclusive to democratic leaders, recent scholarship makes clear that authoritarian leaders also have a stake in improving the welfare of their population. This dynamic is most readily apparent in electoral authoritarian regimes, as the potential for downward shifts in public support at election time creates pressures for such regimes to "pay attention to citizen concerns" (Teo, 2021: 219; see also Miller, 2015). Indeed, the existence of budget cycles that track with non or semi-competitive elections suggests that even dictators are mindful of the benefits associated with providing public goods to a broader audience (Blaydes, 2011; Grier and Grier, 2000; Han, 2021; Higashijima, 2022; Pepinsky, 2007). Public goods can also benefit autocrats beyond their effect on redistribution, as Paglayan (2020) demonstrates in her study focused on primary education. Investing in a SWF reduces the capital available to furnish such goods.

Research directly examining autocratic SWF creation is rare, though existing theory does provide one plausible argument. Specifically, the intertemporal logic of fund creation – where costs are borne immediately while benefits materialize well into the future – might ostensibly suggest that SWFs are more common in single party autocracies, since they are less prone to collapse than their non-party based counterparts (Geddes, 1999; Magaloni, 2008). Because such regimes may be more durable a priori, leaders might be willing to forgo spending on imperatives like private and public goods in favor of more risky choices like a SWF.

Though intuitively appealing, there appears to be limited evidence in support of this relationship, as illustrated in Table 1. Specifically, we calculate the share of all autocratic regime years between 1960 and 2010 where a party-based autocracy was in power. A value of "1" would indicate that a country's entire history of autocratic rule was under a single party, while a value of zero would indicate that the autocratic regime was never controlled by a single party.[1] We report the average values of this measure for two samples of autocracies: those that have established SWFs, and those that have not. If SWFs were more likely to emerge in the context of single party rule, we would expect large differences between the groups. Yet as a Table 1 reveals, the difference between the group means is both trivial and statistically indistinguishable from zero. We conduct a more thorough empirical

Table 1. Party-based autocracy and sovereign wealth fund creation.

Group	N	Mean Years of Single Party Control as Share of Total Duration (SE)
Autocracies with a SWF	22	0.47 (0.10)
Autocracies without a SWF	95	0.43 (0.04)
Difference (pr SWF > ∼ SWF)	—	0.04 (p = 0.7; t = 0.38)

evaluation below, but emphasize that even simple descriptive patterns suggest that autocrats' decisions to create SWFs may defy explanation based on conventional understandings of formal institutions, distributive politics, and regime survival.

There is a larger literature on SWF creation more generally – that is, for all political regime types. These studies tend to emphasize economic considerations, including trade surpluses and reserve accumulation (Aizenman and Glick, 2009), dependence on extractive sector imports (Gouett, 2020; Carpantier and Vermeulen, 2018; Amar et al., 2018), and the role of SWFs a risk-mitigating response to the destructive vagaries of world markets (Eldredge, 2019). Research emphasizing political factors, however, is particularly sparse. Chwieroth (2014) explains SWF proliferation as a process of policy mimesis wherein groups of kindred states emulate the strategic responses of their peers to common sets of domestic policy challenges. Braunstein emphasizes the interaction between state institutions and societal actors in the form of policy networks to explain why Singapore created a SWF while Hong Kong promoted private financial institutions (2017), and to account for SWF variation in the four Gulf Cooperation Council countries ([1]2018). Carpantier and Vermeulen (2018) identify a link between political regime type and SWF creation in finding that over the last two decades, non-democracies have been more likely than democracies to create SWFs. Each of these efforts advances our understanding of SWF creation, yet the process remains incomplete, both with regard to theorizing about the domestic political causes of SWFs and their emergence in authoritarian contexts more specifically.

Policy-making Autonomy and Autocratic Sovereign Wealth Funds

Our study departs from prior analyses in focusing specifically on autocratic leaders and the unique sets of constraints they encounter when considering such a risky policy choice. In doing so, we also contribute to a growing literature on the political economy of authoritarianism, including the role of distributive politics as it relates to the logic of political survival and the impact of formal political institutions. Recent years have witnessed a resurgence of theorizing on how internal differences among autocracies shape a host of political and economic outcomes (Gandhi, 2008; Gehlbach and Keefer, 2011; Boix and Svolik, 2013; Magaloni, 2008). Our study is the first to draw on these arguments to identify the conditions associated with the creation of autocratic sovereign wealth funds. In this theoretical section, we make two related arguments. First, we argue that SWFs are attractive institutions for autocrats, despite their high costs. Second, we argue that autocrats with a high degree of policy-making autonomy are more likely to overcome the internal resistance they may face to establishing these funds. This autonomy simultaneously implies a level of political security that encourages autocrats to consider policy choices like SWFs that are intended to deliver benefits primarily in the medium to distant future. We explore each element in turn.

Sovereign wealth funds confer multiple benefits for leaders at both the domestic and international level. First, SWFs hold most, if not all, of their assets internationally. By design, these funds facilitate the transfer of state wealth across borders. This arrangement provides multiple benefits for autocrats. Maintaining wealth overseas can make skimming by regime insiders more difficult, for example. This is particularly the case relative to alternatives like foreign exchange reserves or state-owned enterprises that are more readily subject to exploitative behavior. This function can enable an autocrat to consolidate control over state resources in ways that bolster their political dominance. In this vein, Hatton and Pistor (2011) propose that SWFs represent "autonomy maximizing" institutions that empower autocrats to reward political loyalty, buy off domestic adversaries, and hedge against other threats to their rule. This suggests that a SWF, despite entailing initial hurdles at the creation stage, can be a valuable tool for ensuring political security.

Second, SWF investments offer the promise of sizable financial returns on a recurring basis. Whereas alternatives like foreign exchange reserves typically constitute idle capital, a well-managed SWF can provide significant rents for an autocrat, potentially in perpetuity. Over time, such rents reinforce the ability of autocrats to fund patronage, and they provide a mechanism for supporting the regime in the face of future threats. This may be particularly important for autocrats whose legitimacy depends on the ability to provide economic growth and stability (Hatton and Pistor, 2011). Combined with the domestic political benefits, this wealth maximization function suggests that autocrats are likely to prefer a SWF to traditional alternatives.

Third, SWFs offer geopolitical benefits to their sovereign sponsors. As Drezner (2008, 115) notes, SWFs "sit at the intersection of high finance and high politics." They are highly consequential actors in financial markets, and this confers their principals a degree of influence and corresponding status in world politics. Additionally, a SWF can work to garner respect and trust for autocrats by signaling their intention to manage national wealth in a prudent manner. This may be particularly welcome in cases where funds are capitalized using natural resource rents. Indeed, the primary objective of the IMF-sponsored International Forum of Sovereign Wealth Funds is to promote investment best practices, including transparency, among a membership that includes more than a dozen autocratic SWFs. In this sense, a SWF can operate as a credible commitment device that bolsters the global reputation of an autocrat. Of course, the legitimacy conferred by a SWF can also serve as a type of "fig leaf" aimed at concealing more unsavory activities at the domestic level. This function might be similarly beneficial to certain autocratic leaders.

SWFs are likely to provide additional geopolitical benefits. For instance, Lenihan (2014) regards SWFs as important tools of power politics, arguing that funds can augment a state's relative economic power while supporting both traditional and non-military efforts at internal balancing. Beyond directly supporting the costs of militarization, a large SWF can also serve as a conspicuous signal of unrealized military capability. The concentrated wealth in a SWF communicates an autocrat's ability to amply fund violent conflict, or to support the state in other ways during such events. This might include working to insulate the regime from adverse effects of wartime sanctions. For example, an autocrat could deploy their SWF to supplement revenues lost due to unrealized trade, to obtain international currencies necessary to finance imports, or to attain a desired currency valuation in the face of external pressures.

Sovereign wealth funds may also provide a mechanism for pursuing political objectives. For example, autocrats might direct their funds to invest in strategically or economically sensitive foreign assets, or invest with the objective of facilitating transfers of technology, expertise, or other proprietary assets. Indeed, this possibility has formed the basis of a limited body of scholarship seeking a fuller understanding of how states, including autocracies in particular, utilize their SWFs (e.g. Baghat, 2008, Cohen, 2009; Helleiner, 2009). A dictator might likewise seek to influence the domestic politics of a target state using their leverage over investment recipient firms. On this possibility, Calluzzo, Dong, and Godsell (2017) find that SWFs are disproportionately attracted to US firms that are active campaign contributors, and that the volume of contributions increases following SWF investment. This suggests that a SWF can act as a valuable complement to more traditional tools of foreign policy. These possibilities in tandem with domestic and political benefits likely make SWFs an attractive policy option for autocrats who are capable of creating them.

Nevertheless, creating a SWF requires more than just a recognition of their potential benefits or the availability of surplus capital. SWFs are controversial policies; creating one often requires autocratic leaders to overcome internal resistance, particularly from regime insiders who would rather not lose access to such resources. Given this, we argue that the decision to create a SWF depends on the extent to which an autocrat wields discretion over the policy-making process, or as we term it below, has a high degree of policy-making autonomy. Such leaders are less likely to encounter credible resistance to their policy agenda from regime insiders, and where they do, they are more capable of preventing those insiders from blocking the creation of a SWF. At the same time, policy-making autonomy confers a degree of political security that enables leaders to devote resources to policy choices that yield benefits in the medium to distant future, as opposed to those aimed at providing immediate benefits for the regime. Below we explore these parallel benefits of policy autonomy and highlight the ways in which they increase the likelihood of SWF creation.

In authoritarian settings, political resistance to sovereign wealth fund creation comes not from citizens, but from regime insiders. When Russia created its SWF in 2004, for instance, the government's own Ministry of Economic Development and Trade criticized the decision, arguing that the resources earmarked for a SWF would be better utilized if directed toward development and infrastructure projects (Fortescue, 2010). Other regime insiders sought higher levels of domestic spending on agriculture and industry to facilitate improvements in Russia's domestic economy. Fortescue (2010, 117) recounts "fierce debates" that led to the creation of Russia's SWF, noting that it drew strong support from Vladimir Putin and that the "battle … was a hard fought one." When leaders in China set out to create a SWF, the process likewise generated resistance from within the regime ([1]Liew and He, 2010). Multiple bureaucracies sought to influence the process, each proposing alternative uses for China's foreign exchange reserves, including shoring up inefficient state-owned enterprises and investing domestically to boost the stock market.

Though often framed as simple policy differences, there are a number of political reasons for regime insiders to oppose the creation of sovereign wealth funds. First, capitalizing a SWF reduces the resources available for personal consumption through patronage. When finite capital is committed to an investment fund, regime insiders are forced to compete for a smaller pool of resources. At the same time, channeling resources to investment funds may reduce other opportunities for personal enrichment through corruption. For instance, regime insiders may find it more difficult to skim off the profits of an oil-funded sovereign wealth fund than they would from a traditional state-owned oil industry, since the former is more likely to face regulatory scrutiny and oversight, along with holding most assets overseas.

Second, creating a sovereign wealth fund reduces the resources available for regime insiders to distribute to their own supporters. Access to resources and an ability to shape budget priorities are important tools for regime insiders seeking to develop their own individual support bases. More generally, regime insiders prefer to maintain some discretion over the distribution of domestic funds. Indeed, an entire literature argues that insiders' ability to influence policy – along with the creation of institutions that render leaders' promises to share power with insiders credible – stabilizes authoritarian rule (Magaloni, 2008). Creating an investment fund curtails these opportunities.

Third, sovereign wealth funds limit the immediate resources available for a future leader should political circumstances change. Drawing on Bueno de Mesquita et al.'s, (2003) political survival model, regime insiders should be unwilling to tie up essential financial resources, since they might need them personally if they ever become a challenger to the regime leader, or if they want some other possible challenger to have access to these funds.

For these reasons, we argue that autocrats who lack full policy-making autonomy – that is, those whose tenure depends on sharing decision-making power with insiders otherwise capable of hindering their agenda – are less likely to push for the creation of sovereign wealth funds. In such circumstances, pursuing a SWF risks alienating regime insiders who might defect to rivals. The expectation is different in regimes where autocrats singularly control the policy making process, or lack these constraints entirely. In such cases, internal debate is limited or non-existent, and insiders generally operate in an institutional environment that limits their ability to constrain leader's behavior or extract policy concessions. Such leaders are less encumbered by dissenting views in the policy-making arena, and are thus freer to create a sovereign wealth fund and capture their important financial benefits.

Though there are no prior studies focused on autocratic SWF creation, there is a small literature on the management and functioning of such funds that offers broad support for this part of our argument. Wang and Quan (2016), for instance, demonstrate that the number of veto players influences the degree to which funds have clear and encompassing governance rules. It is more difficult for actors to coordinate and produce mutually agreeable institutional rules when the number of veto players is high. Applied to our argument, these findings support the contention that the actual creation of a fund is especially unlikely when numerous actors can influence policy.

Our focus on policy-making autonomy accords with growing literature that has identified the extent to which leaders must share power with regime insiders as a key point of differentiation among authoritarian regimes. For instance, a number of studies demonstrate that authoritarian governance improves when leaders must share power with regime insiders (Gandhi, 2008). Boix and Svolik (2013) show that the creation of formal political institutions like parties and legislatures help solve commitment and monitoring problems otherwise inherent in authoritarian politics. As such, the presence of these power-sharing institutions is associated with longer regime tenures (see also Magaloni, 2008). Related, Gehlbach and Keefer (2012; 2011) demonstrate that authoritarian parties and legislatures facilitate collective action and enable regime insiders to constrain autocratic leaders, which in turn minimizes commitment problems and results in higher levels of private investment.

A key difference, however, is that while these studies emphasize the consequences of these institutions' *presence*, our argument emphasizes their *absence.* Autocratic leaders are more likely to initiate a SWF when they have freer rein to appoint – and monitor – loyal supporters to key positions and can make policy without having to share power with insiders in coordinating and constraining institutions. In this sense, our argument has more in common with prior studies that emphasize the unique behavior of "personalist" dictatorships (e.g. Colgan and Weeks, 2015).

The ability to overcome internal resistance to SWF creation is only one of the key benefits of policy-making autonomy. In the face of internal opposition, a costly policy choice like a SWF can pose an existential threat to autocrats. Not only might regime insiders work to block the creation of a SWF, they may seek to punish an autocrat by removing them from office. This risk is compounded by the fact that the costs of creating a fund are incurred out of step with the benefits of controlling one. Vulnerable autocrats risk paying the political costs of a SWF but not surviving to reap the financial rewards. In the absence of such security, a leader would be better served by directing resources toward polices designed to provide immediate benefits to the regime. This suggests that a leader must feel sufficiently politically secure to pursue a SWF.

We argue that a high degree of policy-making autonomy, by bestowing leaders with a corresponding level of political security, creates this parallel benefit. Leaders with greater policy-making autonomy preside over an institutional environment that prevents other regime insiders from effectively monitoring, constraining, and sanctioning them. Since most autocratic leader exits come at the hands of regime insiders (Svolik, 2012, 112; Kendall-Taylor and Frantz, 2014, 36), this autonomy generates a considerable degree of political security. In turn, secure leaders are more likely to initiate SWFs, since they are more likely to wield power into the future when the SWF begins to generate greater returns. Insecure autocrats, by contrast, are likely to be more reluctant to establish a SWF, if only because the benefits of such a policy could accrue to a different leader at a future date.

We are unaware of any prior research expressly linking this parallel benefit of policy-making autonomy to the creation of sovereign wealth funds. However, both components of this argument are broadly consistent with major themes in prior work. Analyses by Grundholm (2020), Song (2022), and Geddes, Wright, and Frantz (2018, 196–7), for instance, demonstrate that autocratic leaders who have consolidated their power over the political and security apparatus are less likely to experience a coup and regime breakdown. Similarly, existing scholarship suggests that leaders who believe they survive in power longer tend to adopt more forward-looking policies, including in the realms of macroeconomic policy objectives (Nordhaus, 1975), investment in public goods (Olson, 1993), the use of foreign aid (Wright, 2008), attention to HIV/ADS (Dionne, 2011), the strength of property rights and the level of inward foreign direct investment (Li, 2009; Moon, 2015), and the use of oil rents (Bellinger and Fails, 2021). The closest prior work is Kendall-Taylor (2011, 2012), who demonstrates that politically secure leaders are more likely to invest natural resource profits abroad, while more vulnerable autocrats opt to spend them domestically in a bid to shore up their support coalition. Similarly, Humphreys and Sandbu (2007) suggest that politically secure leaders are more likely to create a natural resource fund – a subset of SWFs designed to limit some of the typical economic maladies of natural resource abundance – while insecure leaders prefer to spend those funds in the present. Nevertheless, no existing studies examine the creation of autocratic sovereign wealth funds directly.

In sum, we argue that autocrats with a high degree of policy-making autonomy are better positioned to override potential objections to creating SWFs, and are more likely to survive in power to reap the future rewards. As such, the degree of a leader's policy-making autonomy should be positively related to the likelihood of fund creation. In the next section, we use event history analysis to test this hypothesis.

Empirical Tests

We evaluate our hypothesis with a dataset of autocratic leader-years. We build our sample of autocracies using data from Geddes, Wright, and Frantz (2014: 317), who adopt a procedural definition of regime type and a binary measurement strategy. Thus, autocracies are regimes where executives achieve or maintain their power in ways other than reasonably fair and competitive elections. Because our theoretical argument concerns the opportunities and incentives of individual autocrats to create sovereign wealth funds, we rely on the same authors' (e.g. Geddes, Wright, and Frantz, 2018) identification of regime leaders – typically the executive – as our unit of analysis. These data, along with the indicators we use to construct our key independent variable, are available from 1960 until 2010. Therefore, our dataset consists of all autocratic leader-years, 1960–2010, with individual model sample sizes limited only by data availability.

We evaluate our argument using survival analysis, which assumes that all autocratic leaders are "at risk" of creating a SWF in a given time period, subject to changes in our covariates. Specifically, we estimate a series of Cox models, an approach which allows us to forego assumptions about the distribution of the baseline hazard rate (Box-Steffensmeier and Jones, 2004).[2]

Our dependent variable is a dichotomous indicator that takes on the value of "1" when a SWF is created during an autocratic leader-year, and a "0" where no fund exists. Analysts have yet to converge on a consensus definition of what constitutes a sovereign wealth fund, and as a result, different studies have relied on distinctive samples. We adopt the definition provided by the IMF-sponsored International Working Group of Sovereign Wealth Funds[3] that conceives of SWFs as "special purpose investment funds … owned by the general government" tasked with "investing in foreign financial assets" (IWG, 2008). In plain language, we conceive of a SWF as a case of a national government-established institution that invests state wealth mostly or entirely in markets across borders. We create this variable using data from the IMF and other primary-source documents. Table 5 in our supplemental material reports the full sample of autocratic-regime years employed in our baseline sample, including the 16 autocratic SWFs.[4]

Our key independent variable is a measure of autocratic leaders' policy-making autonomy, which we create using a series of indicators designed to capture the distribution of power between autocratic leaders and regime insiders. These measures are also drawn from Geddes, Wright, and Frantz's (2018) work, and vary by leader and year.[5] Specifically, we use four binary indicators that describe different facets of autocratic leaders' relationship to and control of their supporting political party, if one exists. The indicators measure whether leaders make access to political office dependent on personal loyalty, whether they create a new support party, whether they control appointment to party executive committees, and whether they enforce rubber-stamp behavior from the executive committee.

These indicators, both individually and combined into an index as described below, measure the distribution of power between autocratic leaders and regime insiders. As such, they are well-suited to measure our concept of policy-making autonomy and the interrelated benefits of providing autocrats with an ability to overcome domestic opposition to SWFs while enhancing their political security. When leaders display these characteristics, regime insiders are less able to shape policy themselves and thus have diminished ability to halt the creation of a SWF. At the same time, leaders that have consolidated their power in this way are less likely to face internal challenges to their rule and generally survive in power longer (e.g. Grundholm, 2020; Song, 2022; Geddes, Wright, and Frantz, 2018, 196–7).[6]

We construct the primary independent variable by calculating a linear combination (Cronbach's alpha) of the four items. We treat the resulting measure as representative of the extent to which a leader has consolidated power over their party system. In the analysis that follows, we refer to this variable as a leader's *policy-making autonomy*. The variable ranges from 0 to 1 at 0.25 intervals in our base sample. Larger values indicate greater levels of autonomy, and we therefore expect them to be associated with an increased hazard of SWF creation. The underlying data represent the presence or absence of these traits as of January 1 in a given year, so we lag the resulting linear combination variable by one year in all empirical analyses. In the supplemental materials, we report several different robustness analyses, including a disaggregation of this index into its four constituent parts and substituting a single factor extracted from principal-components factor analysis.

Importantly, there is considerable variation in this measure within the sample of autocratic leader-years. Figure 1(A) in our supplemental materials present a histogram of observed values of *policy-making autonomy*. The modal value, accounting for slightly more than thirty percent of autocratic leader-years, is 0.25. However, all potential values of the variable are well represented in the distribution; the lowest and highest values of *policy-making autonomy* account for roughly twenty-five and eight percent of the sample respectively. Moreover, this variation persists even within more traditional categories of authoritarian regimes (e.g. personalist regimes, party-based regimes, monarchies, and military regimes). While leaders of "personalist" regimes have, unsurprisingly, the highest average level of *policy-making autonomy*, leader-year observations span the full range of possible values in each regime category (see Figure 2(A) in our supplemental materials). We take this as evidence that our concept of *policy-making autonomy* is distinct from prior conceptualizations of authoritarian rule based on discrete regime classifications.

Our modeling approach involves three different survival analysis specifications. Our baseline and subsequent models build on the following basic equation, which estimates a leader's hazard of creating a SWF subject to changes in covariates of interest:

$$h_{\mathrm{i}}(t) = \exp(B_1 X_{1i} + B_2 X_{2i} + B_k X_{ki}) h_0(t)$$

The baseline model includes our primary IV *policy-making autonomy*, in addition to two economic covariates: the size of a state's economy, as measured by its GDP (log) in constant USD, and proven oil reserves. Multiple analyses have linked economic size to the process of SWF creation. For instance, certain regimes may choose to create SWFs because their domestic economies present few local investment opportunities (Carpantier and Vermeulen, 2018). In a similar vein, Eldredge (2019) proposes that the decision to create a SWF as a form of insurance against economic risk is conditioned, in part, by the size of a state's national economy. We obtain GDP data from the World Bank "World Development Indicators" database. The presence of oil, and by extension natural resource wealth, is an important potential confounder given its relationship to the durability of autocratic regimes, and given its role as a common source of capital for a SWF. Indeed, SWFs are often colloquially referred to as "oil funds," even though many have been established by autocratic regimes with no natural resource wealth whatsoever. We obtain oil reserve data from Haber and Menaldo (2011), updated to capture information up to the year 2010.[7]

Our second model specification adds two additional variables designed to capture potentially confounding traits of autocratic regimes. This includes the tenure of the regime leader (in log years), since longer serving leaders are more likely to develop personalized systems of rule (Geddes, Wright, and Frantz, 2018: 86–7; Svolik, 2012, 76–78). Including this measure ensures that any findings are not simply a function of particularly long-serving autocrats, but rather the parallel benefits of policy-making autonomy that our theory emphasizes. We also include a binary measure distinguishing party-based autocracy from other models of autocratic rule. Party-based autocracies contain, by definition, power-sharing institutions that constrain autocratic leaders, and thus capture differences in the degree to which autocratic leaders have autonomy over the policy-making process. Given our argument, status as a party-based autocracy alone is unlikely to influence the creation of an autocratic SWF. Including these measures directly accounts for these expectations.

Third, we include three additional economic variables linked to SWF creation. The first is the rate of economic growth, which Gouett (2020) shows is an important predictor of SWF creation. Second, we include a measure of trade dependence calculated as the value of imports plus exports as a percentage of GDP. States with greater levels of trade activity, including particularly those with current account surpluses, have been associated with SWF creation (Amar et al., 2018). Further, Eldredge (2019) argues that countries that are more trade-dependent stand to benefit from the risk-mitigating function of SWFs because they are more vulnerable to global market volatility. Regimes that are more trade-dependent may therefore be more likely to create such institutions as a form of insurance. The third captures the value of a state's foreign exchange reserves (log) in current USD. Analysts have linked SWF creation to reserve accumulation (Aizenman and Glick, 2009; Carpantier and Vermeulen, 2018), and a number of autocratic funds have been capitalized using repurposed foreign exchange reserves. We obtain these data from the IMF and the World Bank.[8]

Results and discussion

In Figure 1, we plot the results from these three different Cox model specifications. For ease of visual presentation, we present exponentiated hazard ratios (i.e. coefficient estimates) along with 90 and 95% confidence intervals, though a full table of model estimates is available in our supplemental materials.

Positive and significant coefficient estimates indicate a rising hazard of SWF creation as the covariate increases, while negative estimates indicate the opposite. Larger coefficients likewise indicate a greater hazard of failure. We test the proportional hazards assumption for all models using the Schoenfeld residuals for each covariate, and find no evidence of a violation. We take this as evidence that none of the covariates is associated with nonproportional hazards.[9]

The coefficient estimates on our key independent variable are statistically significant and signed positively for each model presented in Figure 1. This suggests that leaders with a greater degree of policy-making autonomy are significantly associated with an increased hazard of SWF creation. Moreover, the magnitude of the estimated hazard of SWF creation is consistent across each model. We take this as evidence that leader's ability to control the policy-making arena shapes autocratic SWF creation, regardless of other regime characteristics or the sources of capital that might be used to establish such funds.

Using the estimate in Model 3, a one-unit increase in *policy-making autonomy* (i.e. a shift from the minimum possible value of zero to the maximum value of 1, or in real terms a leader's adoption of all four measured aspects of control over their support party) is associated with a 935% ($e^{2.235} = 9.35$) increase in the risk of SWF creation. Even a more plausible shift of one standard deviation ($e^{2.235*0.32} = 2.04$) of the measure is associated with a 200% increase in risk. This doubling of the hazard of SWF

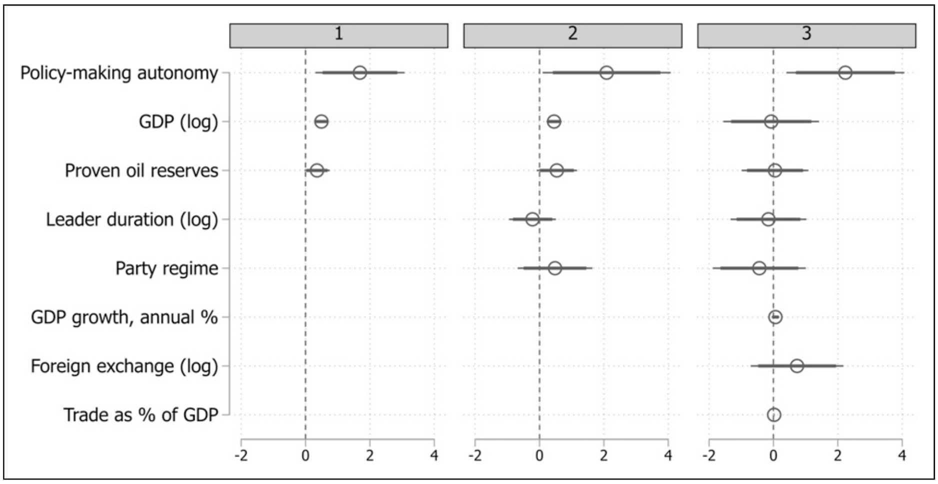

Figure 1. Survival Models of Autocratic SWF Creation. Estimates reported as coefficients with 95 and 90% confidence intervals. Sample is autocratic leader-years, 1960-2010. Standard errors clustered on individual leaders. Models 1-2 have 301 subjects, 16 failures, and 2,650 observations. Model 3 has 251 subjects, 13 failures, and 2002 observations.

creation implies a substantively meaningful relationship between the variables.

Consistent with most prior findings, the results in Models 1 and 2 each suggest that larger economies and larger oil reserves are associated with increases in the hazard of SWF creation, though these results are not significant when we introduce measures accounting for alternative sources of capital in the third model, including trade dependence and foreign exchange reserves. Most importantly for our argument, the coefficient estimates associated with the other regime characteristics are not significant, suggesting that SWF creation is not just a function of long-serving leaders or the formal institutions of party-based authoritarian rule.

Our main findings are robust to a wide array of changes to model specification and sample composition. For ease of interpretation, Figure 2 summarizes our extensive robustness analyses by presenting only the estimated coefficient and confidence intervals for the main variable *policy-making autonomy* from 11 different models representing five distinct approaches to covariate inclusion or sample composition. As above, full tables of model results are available in our supplemental materials.

For reference, Figure 2 starts by reporting the estimated *policy-making autonomy* coefficients from Models 2 and 3 in the prior figure. The remaining five blocks of robustness analyses follow these basic specifications (referred to as M2 and M3 respectively) while addressing separate potential modeling issues that have the potential to influence our results. We start by adding a measure of current account balance (as a share of GDP) to the models to capture additional macroeconomic conditions that may provide the necessary funds to capitalize a SWF.[10] Second, we drop from the sample leader-years immediately preceding democratization. Our survival analysis presumes that countries exit the sample when they create a SWF. However, given our focus on autocracies, countries can also exit the sample if they democratize. This exercise drops from the analysis those observations on the precipice of democratization, to ensure that this dynamic is not influencing our results.

We also assess whether broad patterns of regime transition within countries shape our main results. We do this in two separate ways: first by controlling for whether the current autocratic regime was preceded by a democracy, and second by controlling for the total number of autocratic regime failures. Both measures account for general regime dynamics that may influence the risk of creating a SWF. Finally, we re-estimate all three models in Figure 1, though switch the unit of analysis to autocratic regime-year, and cluster standard errors at the regime level. Despite the differences between these various modeling approaches, our key result remains stable and statistically significant at the 95% confidence level in all 11 permutations; none of the estimated 95% confidence intervals crosses the vertical dashed line at zero on the X axis.

Our supplemental materials present a wide array of additional robustness checks. These include a model wherein we disaggregate our measure of *policy-making autonomy* and re-estimate the baseline specification while controlling for each component individually. Three of the

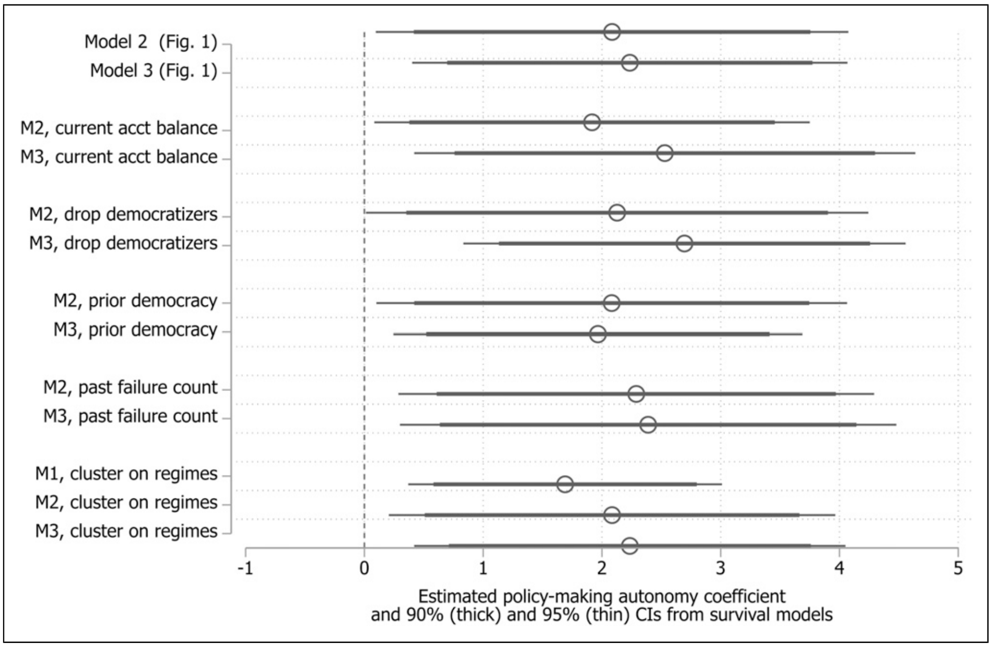

Figure 2. Robustness of main results. M1 = model 1 (Figure 1) specification, M2 = model 2 (Figure 1) specification, and M3 = model 3 (Figure 1) specification. Sample details for all other models reported in tabular results in appendix.

individual indicators have positive and statistically significant (at the 10% level) effects on the risk of SWF creation; the variable measuring the creation of a new support party is the only one whose survival model coefficient is not distinguishable from zero. This is not surprising; the creation of a new support party is the trait that appears least often in our estimation sample, characterizing only twenty percent of all observations, whereas the other four traits occur in between thirty-three and seventy percent of all observations. In other words, the insignificant coefficient here may simply reflect the scarcity of instances in which new parties were created. Nevertheless, this exercise confirms that our core findings presented above are not overly dependent on a particular component of our measure.

Our supplemental analyses also include re-estimated models using a measure of *policy-making autonomy* extracted from principal-components factor analysis. In this case, a single factor was extracted and retained for the analysis. Finally, we re-estimate the models while including regional fixed effects and employing three alternative measures of natural resource wealth, including a measure of total natural resource rents as a share of GDP and two measures of the export value of oil and gas production. Across all of these additional specifications, our core findings are identical to those presented above; higher levels of *policy-making autonomy* are robustly associated with an increased hazard of fund creation.

Conclusion

This study sets out to explore the processes of autocratic SWF creation, a puzzling trend that has accelerated in recent decades. It offers contributions to two related research programs in the process. The determinants of SWFs have remained largely understudied by social scientists, and existing efforts have tended to focus on economic explanations while neglecting potentially relevant political factors. In contrast with this trend, we emphasize the role of autocratic leaders' policy-making autonomy, which allows them to override the opposition to SWFs from regime insiders while helping to ensure they survive in power long enough to reap the future political, financial, and geopolitical rewards of such a controversial policy. We operationalize this concept using multiple indicators of an autocrat's consolidation of power over the party apparatus and find robust support for our argument. On the basis of these findings, we suggest that scholars consider policy-making autonomy as an essential condition of autocratic SWF creation.

We likewise contribute to research programs exploring the political economy of authoritarianism. Ours is the first study to focus specifically on the particular constraints faced by autocrats when considering sovereign wealth funds as a policy choice. These constraints are a simultaneous byproduct of the distinctive nature of SWFs as medium to long-term international investment vehicles, and of the overarching need for autocrats to emphasize policies that will enhance regime survival. Our proposed logic provides a roadmap for how autocrats navigate these constraints in pursuit of one particular high-risk policy option, though is not limited exclusively to SWF creation. We might expect that such autocrats will be more inclined to entertain a wider variety of controversial policy choices relative to their more constrained counterparts. This could include creating multiple funds, different levels of governance structures for funds, or how frequently SWFs are used to finance domestic spending or lending to domestic elites. Funds may differ from one another based on the strategic needs of autocratic leaders as well; for instance, those who face a greater pool of potential domestic challengers may opt to structure funds in a way that allows greater personal influence over the fund's management. Future work would benefit from collecting the data necessary to analyze these issues.

While our emphasis here remains on autocratic SWF creation, further research may also theorize about how these parallel benefits unfold within democratic governments. To be sure, democratic leaders face their own distinctive sets of constraints in the policy sphere, and the risks and opportunity costs of SWF creation likewise remain for this category of leader. It follows that politically insecure or term-limited democrats may be less inclined to pursue SWF creation, albeit due to different sets of political incentives. These questions are among the many that future work should address in order to better understand these important actors in the global political economy.

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Supplemental Material

Supplemental material for this article is available online.

Notes

1. These data come from Geddes, Wright, and Frantz (2014). See our Empirical Approach section for further details.
2. Two forms of right censoring are possible in our research design. First, an autocrat might exit the sample not because of failure, but because their regime democratizes, and second, an autocrat might create a SWF after the analysis period ends. We are confident that our results are invariant to either possible form. First, existing evidence suggests that autocrats are more likely to create SWFs than democrats (Carpantier and Vermeulen, 2018). This suggests that an autocratic leader in the process of democratic transition would be *less* likely to create a SWF. In our supplemental materials, we present model estimates derived from a sample that drops leader-years immediately preceding a transition to democracy. This approach eliminates the possibility that a state exits the sample because it democratizes. Our estimates are invariant to these changes in the sample, suggesting that SWF creation is unlikely to be driven by dynamics linked to regime transition. Second, existing studies have found no evidence of bias induced by censoring due to a leader "failing" after the conclusion of an analysis (e.g., Carpantier and Vermeulen, 2018, Chwieroth, 2014, Gouett, 2020). In particular, Gouett (2020) finds no evidence of bias in an analysis period that concludes in 2017.
3. The International Working Group of Sovereign Wealth Funds changed its name to the "International Forum of Sovereign Wealth Funds" in 2009.
4. We identify 24 total autocratic SWFs. Some funds are dropped from our sample because they were created before our time frame (Kuwait in 1953), some because they were created before formal political independence (United Arab Emirates), and others because they lack the population size to be included in the other data sources we use (e.g. Brunei and Equatorial Guinea). Given the institutional structure of these regimes, however, their exclusion presents a more difficult empirical test for our argument.
5. Geddes, Wright, and Frantz (2018) provide numerous other indicators of the degree of personalism within autocracies, including those capturing the extent to which leaders control the security apparatus, such as the creation of paramilitary forces and purging disloyal military elites. Given our argument, we focus on the relationship between autocratic leaders and their support party. Our discussion and measurement draws specifically from Frantz et al. (2019) and the discussion in their supplemental material (*p*. 21–2).
6. Given our emphasis on political security, some readers may wonder why we create our own measure instead of relying on existing operational definitions of leaders' "time horizons." We provide two related responses. First, both existing approaches to measuring time horizons – those measuring regime duration on the assumption that what has lasted a long time is likely to remain in place (e.g. Cao and Ward, 2015; Clague et al., 1996; Li 2009), and those using predicted probabilities of regime failure (e.g. Cheibub, 1998; Chen and, Ye 2020; Moon, 2015; Wright, 2008) – are problematic in multiple ways. For an overview of potential flaws with each approach as an operational measure of "time horizons," see Bellinger and Fails (2021). Second, neither approach measures whether leaders are able to override policy opposition from regime insiders, or conversely whether they must share in the policy-making process with these other elites. We suggest that measuring the degree to which leaders have consolidated their control over their party system measures both of these theoretically relevant dimensions.
7. Our results are robust to alternative measures of natural resource wealth, including some that measure the specific export earnings from oil and gas production. See the results discussion below and Table A5 in the Supplemental Materials.
8. Our results section discusses a variety of robustness analyses, some of which involve additional covariates. Details about those measures are contained in that section.
9. We similarly test the proportional hazards assumption for each model presented in the Supplemental Materials. We find no evidence consistent with a violation of this assumption.
10. Current account balance data from both the World Bank and International Monetary Fund has considerable amounts of missing data, especially for our sample of autocracies stretching back to the 1960s. Thus, we prefer to present this as a robustness analysis, rather than include the measure in our regular specifications.

References

Aizenman, Joshua, and Reuven Glick. 2009. "Sovereign Wealth Funds: Stylized Facts about their Determinants and Governance." *International Finance* 12 (3): 351-86.

Amar, Jeanne, Christelle Lecourt, and Valerie Kinon. 2018. "Is the emergence of new sovereign wealth funds a fashion phenomenon?" *Review of World Economics*. 154: 835-73.

Bahgat, Gawdat. 2008. "Sovereign Wealth Funds: Dangers and Opportunities." *International Affairs* 84.6: 1189-204.

Bellinger, Nisha, and Matthew D. Fails. 2021. "When Does Oil Harm Child Mortality?" *Political Research Quarterly* 74 (3): 645-57.

Blaydes, Lisa. 2011. *Elections and Distributive Politics in Mubarak's Egypt*. Cambridge: Cambridge University Press.

Boix, Carles, and Milan W. Svolik. 2013. "The Foundations of Limited Authoritarian Government: Institutions, Commitment, and Power-Sharing in Dictatorships." *Journal of Politics* 75 (2): 300-16.

Box-Steffensmeier, Janet M., and Bradford S. Jones. 2004. *Event History Modeling: A Guide for Social Scientists*. Cambridge: Cambridge University Press.

Braunstein, Juergen. Domestic Sources of Twenty-first-century Geopolitics: Domestic Politics and Sovereign Wealth Funds in GCC Economies. *New Political Economy* 2018; 24(2): 197–17.

Braunstein, Juergen. 2017. "The domestic drivers of state finance institutions: evidence from sovereign wealth funds." *Review of International Political Economy* 24 (6): 980-1003.

Bueno de Mesquita, Bruce, Alastair Smith, Randolph M. Siverson, and James D. Morrow. 2003. *The Logic of Political Survival*. Cambridge: MIT Press.

Calluzzo, Paul, G. Nathan Dong, and David Godsell. 2017. "Sovereign wealth fund investments and the US political process." *Journal of International Business Studies* 48: 222-43.

Cao, Xun, and Hugh Ward. 2015. "Winning Coalition Size, State Capacity, and Time Horizons: An Application of Modified Selectorate Theory to Environmental Public Goods Provision." *International Studies Quarterly* 59 (2): 264-79.

Carpantier, J.F., and W.N. Vermeulen. 2018. "Emergence of sovereign wealth funds." *Journal of Commodity Markets* 11: 1-21.

CIC. 2018. "*Annual Report 2018: China Investment Corporation*." China Investment Corporation.

Cheibub, Jose Antonio. 1998. "Political Regimes and the Extractive Capacity of Governments: Taxation in Democracies and Dictatorships." *World Politics* 50 (3): 349-76.

Chen, Jia, and Fangjin Ye. 2020. "Cost of Compliance, Autocratic Time Horizon, and Investment Treaty Formation." *Political Research Quarterly* 73 (2): 325-39.

Chwieroth, Jeffrey M. 2014. "Fashions and Fads in Finance: The Political Foundations of Sovereign Wealth Fund Creation." *International Studies Quarterly* 58: 752-63.

Clague, Christopher, Philip Keefer, Knack Stephen, and Mancur Olson. 1996. "Property and Contract Rights in Autocracies and Democracies." *Journal of Economic Growth* 1: 243-76.

Cohen, Benjamin J. Sovereign wealth funds and national security: the Great Tradeoff. *International Affairs* 2009; 85(4): 713–31.

Colgan, Jeff D., and Jessica L.P. Weeks. 2015. "Revolution, Personalist Dictatorships, and International Conflict." International Organization 69 (1): 163-94.

Dionne, Kim Yi. 2011. "The Role of Executive Time Horizons in State Response to AIDS in Africa." *Comaprative Political Studies* 44 (1): 5-77.

Drezner, Daniel W. Sovereign Wealth Funds and the (In)security of Global Finance. *Journal of International Affairs* 2008; 62(1): 115–30.

Economist. Asset-backed Insecurity. *The Economist* 2008; 386(8563): 71.

Economist. Sovereign Wealth, Sovereign Whims. *The Economist* 2019; 431(9147): 46.

Eldredge, Cody D. 2019. "Capability and need: A framework for understanding why states create sovereign wealth funds." *The World Economy* 42: 1495-519.

Frantz, Erica, Andrea Kendall-Taylor, Joseph Wright, and Xu Xu. 2019. "Personalization of Power and Repression in Dictatorships." *The Journal of Politics* 82 (1): 372-77.

Fortescue, Stephen. 2010. "Russia's SWFs: Controlled by a Domestic Agenda." In *The Political Economy of Sovereign Wealth Funds*, eds. Xu Yi-Chong and Gawdat Bahgat. Basingstoke, UK. Palgrave.

Gandhi, Jennifer. 2008. *Political Institutions under Dictatorship*. Cambridge: Cambridge University Press.

Geddes, Barbara. 1999. "What Do We Know About Democratization After Twenty Years?" *Annual Review of Political Science* 2: 115-44.

Geddes, Barbara, Joseph Wright, and Erica Frantz. 2014. "Autocratic Breakdown and Regime Transitions: A New Data Set. *Perspectives on Politics* 12(2): 313-31.

Geddes, Barbara, Joseph Wright, and Erica Frantz. 2018. *How Dictatorships Work: Power, Personalization, and Collapse*. Cambridge: Cambridge University Press.

Gehlback, Scott, and Philip Keefer. 2011. "Investment without democracy: Ruling-party institutionalization and credible commitment in autocracies." *Journal of Comparative Economics* 39: 123-39.

Gouett, Matthew. 2020. "New wealth, New wisdom: Updating the narrative of sovereign wealth fund creation." *Resources Policy* 65: 1-12.

Grier, Robin M., and Kevin B. Grier. 2000. "Political Cycles in Nontraditional Settings: Theory and Evidence from the Case of Mexico." *The Journal of Law and Economics*. 43 (1): 239-63.

Grundholm, Alexander Taaning. 2020. "Taking It Personal? Investigating Regime Personalization as an Autocratic Survival Strategy." *Democratization* 27:797–85.

Haber, Stephen, and Victor Menaldo. 2011. "Do Natural Resources Fuel Authoritarianism? A Reappraisal of the Resource Curse." *American Political Science Review* 105 (1): 1-26.

Han, Kangwook. 2021. "Political Budgetary Cycles in Autocratic Redistribution." *Comparative Political Studies* 55, 727-56, DOI: 10.1177/00104140211036038

Hatton, Kyle, and Katharina Pistor. 2011. "Maximizing Autonomy in the Shadow of Great Powers: The Political Economy of Sovereign Wealth Funds." *Columbia Journal of Transnational Law* 50 (1): 1-81.

Helleiner, Eric. 2009. "*The Geopolitics of Sovereign Wealth Funds: An Introduction*." *Geopolitics* 14: 300-304.

Higashijima, Masaaki. 2022. *The Dictator's Dilemma at the Ballot Box: Electoral Manipulation, Economic*

Maneuvering, and Political Order in Autocracies. Ann Arbor: The University of Michigan Press.

Humphreys, Macartan, and Martin E. Sandbu. 2007. "The political economy of natural resource funds." In *Escaping The Resource Curse*, eds. Macartan Humphreys, Jeffrey Sachs, and Stiglitz Joseph. New York: Columbia University Press.

IFSWF. 2020. "*Libyan Investment Authority*." International Forum of Sovereign Wealth Funds.

IWG. 2008. "*Sovereign Wealth Funds: Generally Accepted Principles and Practices*." International Working Group of Sovereign Wealth Funds.

Kendall-Taylor, Andrea. 2011. "Instability and Oil: How Political Time Horizons Affect Oil Revenue Management." *Studies in Comparative International Development* 46 (3): 321-48.

Kendall-Taylor, Andrea. 2012. "Purchasing Power: Oil, Elections and Regime Durability in Azerbaijan and Kazakhstan." *Europe-Asia Studies* 64 (4): 737-60.

Kendall-Taylor, Andrea, and Erica Frantz. 2014. "How Autocracies Fail." *The Washington Quarterly* 37 (1): 35-47.

Klitzing, Espen, Diaan-Yi Lin, Susan Lund, and Laurent Nordin. 2010. "Demystifying Sovereign Wealth Funds." In *Economics of Sovereign Wealth Funds: Issues for Policymakers*, eds Udaibir S. Das, Adnan Mazarei, and Han van der Hoorn. Washington, DC: International Monetary Fund.

Lenihan, Ashley Thomas. 2014. "*Sovereign Wealth Funds and the Acquisition of Power*." *New Political Economy* 19 (2): 227-57.

Li, Quan. 2009. "Democracy, Autocracy, and Expropriation of Foreign Direct Investment." *Comparative Political Studies* 42 (8): 1098-247.

Liew, Leong H., and Liping He. 2010. "Contributing to a Harmonious Society: China's Sovereign Wealth Fund." In *The Political Economy of Sovereign Wealth Funds*, eds Xu Yi-Chong and Gawdat Bahgat. Basingstoke, UK: Palgrave.

Magaloni, Beatriz. Credible Power-sharing and the Longevity of Authoritarian Rule. *Comparative Political Studies* 2008; 41(4–5): 715–41.

Miller, Michael K. 2015. "Electoral Authoritarianism and Human Development." *ComparativePolitical Studies* 48 (12): 1526-552.

Moon, Chungshik. 2015. "Foreign Direct Investment, Commitment Institutions, and Time Horizon: How Some Autocrats Do Better than Others." *Internationtal Studies Quarterly* 59 (2): 344-56.

Nordhaus, William D. 1975. "The Political Business Cycle." *The Review of Economic Studies* 42 (2): 169-90.

Olson, Mancur. 1993. "Dictatorship, Democracy, and Development." *American Political Science Review* 87 (3): 567-76.

Paglayan, Agustina S. 2020. "*The Non-Democratic Roots of Mass Education: Evidence from 200 Years*." American Political Science Review.

Pepinsky, Thomas. 2007. "Autocracy, Elections, and Fiscal Policy: Evidence from Malaysia." *Studies in Comparative International Development* 42 (2–1): 136-63.

Shields, Jon, and Mauricio Villafuerte. 2010. "Sovereign Wealth Funds and Economic Policy at Home." In *Economics of Sovereign Wealth Funds: Issues for Policymakers*, eds Udaibir S. Das, Adnan Mazarei, and Han van der Hoorn. Washington, DC: International Monetary Fund.

Song, Wonjun. 2022. "Dictators, Personalized Security Forces, and Coups." *International Interactions* 48 (2): 4-32.

Svolik, Milan. 2012. *The Politics of Authoritarian Rule*. Cambridge: Cambridge University Press.

SWF Institute. 2020. "National Development Fund of Islamic Republic of Iran (NDFI)." Sovereign Wealth Fund Institute.

Teo, Terence K. Inequality under Authoritarian Rule. *Government and Opposition* 2021; 56(2): 201–25.

Wang, Di, and Li Quan. 2016. "Democracy, Veto Player, and Institutionalization of Sovereign Wealth Funds." *International Interactions* 42 (3) 377-400.

Wright, Joseph. 2008. "To Invest or Insure? How Authoritarian Time Horizons Impact Foreign Aid Effectiveness." *Comparative Political Studies* 41 (7): 971-1000.

Wright, Joseph, Erica Frantz, and Barbara Geddes. Oil and Autocratic Regime Survival. *British Journal of Political Science* 2015; 45(2): 287–306.