

Monopoly Rents and Foreign Direct Investment in Fixed Assets*

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Abstract

This article advances the literature on political institutions and foreign direct investment (FDI) by differentiating both foreign investors and authoritarian regimes. We argue that firms' fixed asset intensity shapes their preferences for institutional environments. High fixed asset intensity acts as entry barriers, resulting in concentrated market structures and stronger firms' incentives for monopoly rent extraction. Lack of de facto institutional constraints and leaders' families' control of key economic sectors in personalist dictatorships should therefore make them more attractive to fixed asset investors. Empirically, we show that, compared to other regimes, personalist dictatorships have a higher ratio of primary FDI to GDP. We also find that personalist dictatorships correlate with more FDI in fixed asset intensive industries but the relationship turns negative in mobile asset intensive industries. Furthermore, we provide evidence that personalist regimes are associated with lower transparency and accountability, more corruption prosecutions, and higher market concentration in the primary sector. Our study highlights the importance of accounting for differences among investors as well as variation in political regimes to understand how politics influences FDI.

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1 Introduction

How do political institutions affect inflows of foreign direct investment (FDI)? There is now a large literature devoted to answering this question. Scholars have offered competing explanations. Some argue that democracies attract more foreign investment because these countries have more stable policies, and political risks are lower due to institutional constraints on the executive, such as checks and balances, veto players, and audience costs (Henisz, 2002; Jensen, 2003, 2006, 2008). Others posit that autocracies safeguard multinationals' monopolistic or oligopolistic rents and thus attract more foreign investment (O'Donnell, 1978, 1988), while still others contend that both democracy and autocracy have conflicting effects on FDI inflows and the net effect of democracy is negative (Li and Resnick, 2003). Empirical findings so far are inclusive (see e.g. Busse and Hefeker, 2007; Choi and Samy, 2008; Jensen, 2003; Li and Resnick, 2003; Yang, 2007).

We extend the literature on political institutions and FDI in two directions. First, instead of treating all types of FDI as a whole,¹ we examine heterogeneity among different investors. Multinational corporations (MNCs) vary in factors such as capital intensity, asset mobility, and skill profiles, and investors differ in the extent to which they can capitalize on different locational advantages – including the institutional environment – that allow them to make most use of their firm-specific assets (Caves, 1996; Dunning, 1981, 1988). Second, conceptualizing political regimes as either democracy or autocracy masks critical differences within these broad categories. Some argue, for example, that dictatorships differ as much from each other as they do from democracies (Geddes, 2003); and a large literature establishes that the various political institutions autocratic leaders employ to build support coalitions and share power influence political and economic outcomes – such as economic growth, private investment, leader survival, and foreign policy – in these regimes (e.g., Boix and Svolik, 2013; Gandhi and Przeworski, 2006; Gehlbach and Keefer, 2012; Lust-Okar, 2005; Magaloni, 2008; Weeks, 2012; Wright, 2008). The wide variation in autocratic institutional arrangements, we argue, also shapes foreign investors' preferences. We thus extend the literature on the political determinants of foreign investment by investigating how differences among authoritarian regimes influences different types of foreign investment.

We emphasize the role of fixed assets as entry barriers in shaping market dynamics and foreign

¹Blanton and Blanton (2009), Schulz (2009), and Zhu (2012) are notable exceptions.

investors' preferences for institutional environments. Large initial capital requirements and consequent high sunk costs associated with fixed asset investments deter potential rivals and thus limit market competition, giving rise to opportunities for MNCs to extract monopoly or oligopoly rents. Because autocratic leaders in personalist dictatorships typically lack formal institutions that check their individual power and these leaders' families and close political allies often control key economic sectors, we posit that personalist dictatorships are attractive to fixed asset investors. With few institutional obstacles, foreign investors can more easily extract monopoly or oligopoly rents from fixed asset investments in these regimes.

To test this argument, following the “obsolescing bargain” literature (Vernon, 1971, 1980), we proxy fixed asset intensity by sector of investment: primary sector investment as a proxy for relatively high fixed asset intensity (immobile) and secondary sector investment as relatively low fixed asset intensity (mobile). Utilizing sectoral FDI inflow data from the United Nations Conference on Trade and Development (UNCTAD) for developing countries from 1980 to 2010, we find that compared to other political regimes, personalist dictatorships attract more primary sector FDI as a share of GDP. These results are robust to different transformations of the dependent variables, the inclusion or exclusion of influential observations, and the use of different estimators. We also find that personalist dictatorships correlate with more FDI in fixed asset intensive industries but the relationship turns negative in mobile asset intensive industries. Furthermore, we provide evidence that personalist dictatorships have a higher market concentration, a lower level of transparency and accountability, and more corruption prosecutions in the primary sector. These findings demonstrate that personalist dictators tolerate market concentration and facilitate monopoly rent extraction. Taken together, our results suggest that foreign investors in fixed assets, who seek to extract high monopoly or oligopoly rents, favor institutional environments that restrict market competition and lack transparency and accountability.

Our study adds to the debate on political institutions and FDI inflows. Foreign investors are a heterogeneous group and their investments are motivated by different factors. We show that the degree of fixed asset intensity shapes foreign investors' choice of institutional environments: investors in fixed assets favor institutions that safeguard monopoly or oligopoly rents, which we argue are most likely in personalist dictatorships. In sectors with more mobile assets, however, we find no advantage for personalist regimes. These findings help explain the inconsistency of empirical

results on the relationship between political institutions and FDI inflows. We demonstrate that different political regimes are attractive to different types of foreign investors.

Our findings also have important implications for domestic governance in authoritarian regimes. We show that foreign investors in the primary sector are not necessarily deterred by high expropriation risks in personalist regimes (see Wilson and Wright, 2015). Instead, they invest in these regimes to extract monopoly rents. This type of foreign investment is also likely to stifle market competition and result in more rent-seeking activities, which may deteriorate governance, especially in developing countries where rule of law is weak (see Pinto and Zhu, 2016 and Zhu, 2016). Given the cozy relationship between foreign investors and autocratic elites, strengthening regulations to improve governance from inside is likely to be difficult. Efforts to push for transparency and accountability of both MNCs and host governments, such as Extractive Industry Transparency Initiative, could be effective.

2 Literature Review

One central debate in the political economy of FDI literature is whether democratic institutions attract more foreign investment. Early work argues that authoritarian leaders, in an effort to promote industrialization, are better able to safeguard MNCs' monopoly rents by suppressing wages, labor unions, and the populist demand for consumption (O'Donnell, 1978, 1988). While Oneal (1994) finds no evidence that authoritarian regimes attract more U.S. foreign investment, this study shows that returns are higher in dictatorships.

More recently, scholars adopted a neo-intuitionist approach from North and Weingast (1989) to study how political institutions affect FDI inflows. This literature starts with the premise that mobile capital becomes relatively immobile after investment takes place, and thus an obsolescing bargain is struck under the risk of government expropriation (Vernon, 1971, 1980). To attract foreign investment, host governments have ex ante incentives to minimize arbitrary interventions and commit to liberal economic policies. Nonetheless, a challenge remains insofar as it is difficult for host governments to credibly commit to forgo opportunistic behavior ex post, given foreign investment's relative immobility. Scholars thus posit that democratic institutions, such as checks and balances, veto players, and audience costs, may prevent the state's predatory behavior by

ensuring policy stability and providing secure property rights protection, and thus attracting FDI (Henisz, 2002; Jensen, 2003, 2006; Li and Resnick, 2003).

To date, empirical findings remain inclusive. Jensen (2003, 2006), Jakobsen and De Soysa (2006), and Busse and Hefeker (2007) show that democratic institutions are associated with more FDI inflows, and Jensen (2008) provides further evidence that multinationals pay lower premiums for investment insurance against political risks in democracies than in autocracies. However, other studies contest the positive association between democracy and foreign investment. Li and Resnick (2003), for example, find a net negative effect of democracy on FDI after controlling for property rights protection, while Resnick (2001) shows that democratic transitions decrease FDI inflows. Li (2009*a*), meanwhile, demonstrates that expropriation risk is greater in democracies with few political constraints and a high leadership turnover. Asiedu and Lien (2011) show that the democratic advantage decreases in countries with rich nature resources, while Yang (2007) concludes that whether democracies receive more FDI inflows is sensitive to the measure of political regime. Finally, firm-level studies suggest that policy environments and institutional features such as rule of law, property rights protection, and policy consistency are more important than whether regime is a democracy (Biglaiser and Staats, 2010; Shi and Zhu, 2015).

We extend the extant literature on political institutions and FDI in two ways. First, instead of relying on aggregate FDI flows, we examine heterogeneity among different types of investment. Foreign investment varies by factors, such as capital intensity, asset mobility, and skill profiles, that are likely to shape MNCs' preferences for institutional environments. For instance, Blanton and Blanton (2009) show that foreign direct investors with high skill levels and intention for societal integration in the host favor countries that respect human rights. This is because human rights protection encourages citizens' investment in human capital and facilitates firms' cultivation of "social license." Second, the broad distinction between democracy and autocracy masks the vast differences among different regimes in these broad categories. Building on the authoritarianism literature, we show that because different dictatorships present distinct institutional settings for foreign investors, they tend to attract different types of investment.

3 Fixed Assets, Monopoly Rents, and Foreign Investment

The extant literature on political institutions and FDI starts with the premise that capital becomes immobile – and thus a hostage to host governments – after investment takes place. This logic of “obsolescing bargains” assumes that the interests of the MNC conflict with those of the host government (Vernon, 1971, 1980). The literature thus focuses on one aspect of fixed assets – ex post immobility – and the vulnerability to host government’s opportunistic behavior. Yet nationalization and asset expropriation have been rare since the late 1970s (Kobrin, 1984; Wilson and Wright, 2015), as shown in Figure 1.² Furthermore, MNCs are able to protect their assets even in extractive industries by leveraging a variety of strategies such as forming joint ventures, establishing vertical linkages, and lobbying their home governments on board (Eden, Lenway and Schuler, 2005; Jenkins, 1986; Johns and Wellhausen, 2016; Moran, 1973). This leads some scholars to conclude that “the obsolescing bargain model has outlived its usefulness” (Eden, Lenway and Schuler, 2005).

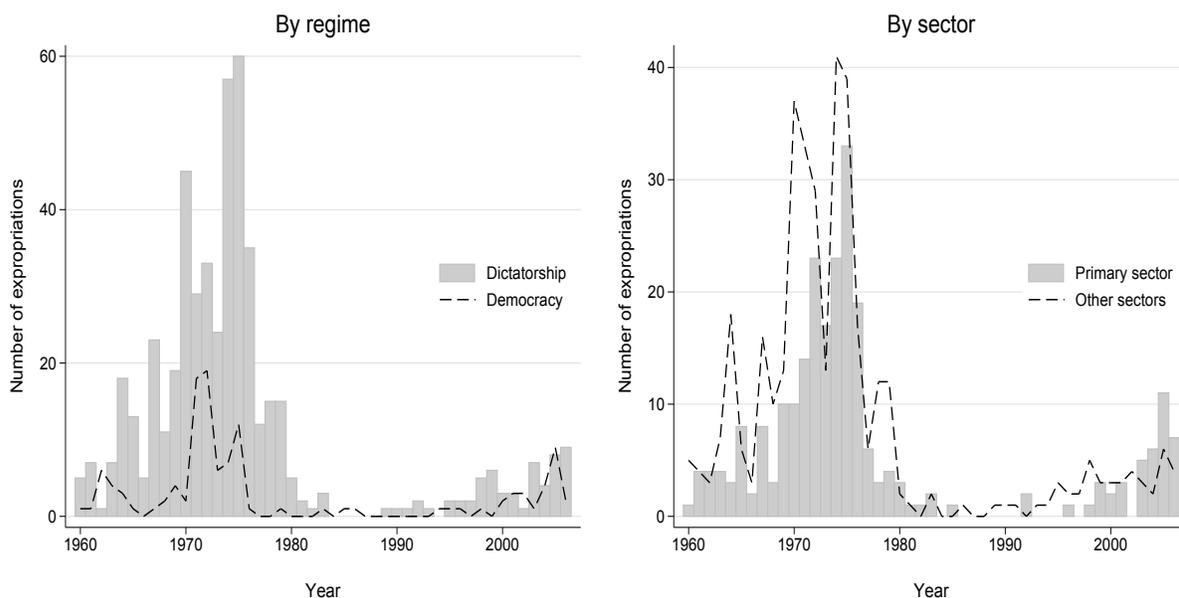


Figure 1: *Expropriations, by regime and sector.*

The (im)mobility of assets, we believe, still remains important in analyzing MNCs’ investment strategies. Yet the incidence of illiquid asset expropriation has been relatively low since the end

²Data on expropriations is from Kobrin (1984) and Hajzler (2012). There were 25 expropriations in the primary sector in the 25 years after 1980; 10 are agricultural assets, 9 are petroleum, and 6 are mining.

of the oil price shocks of the 1970s and the start of the Washington Consensus in the 1980s.³ Emphasizing the ex post illiquidity of foreign investment overlooks another critical aspect of fixed asset: high initial capital requirements and the substantial sunk costs that act as entry barriers to shape market dynamics and opportunities for monopoly or oligopoly rent extraction.

Fixed asset intensive investments are, by definition, capital intensive because they require the transformation of large amounts of liquid capital into land, buildings, machinery, and equipment. High capital requirements are beyond the reach of many firms, which creates entry barriers for potential entrants (Bain, 1956; Duetsch, 1984; Geroski, 1995). Firm-level surveys show that executives view capital requirements as one of the most important entry barriers (Karakaya and Stahl, 1989; Karakaya, 2002). Furthermore, fixed asset investments typically incur relatively high sunk costs that are not recoverable. Fixed assets that become sunk costs ex post entail substantial economies of scale (Bain, 1956). In other words, the greater the output, the lower the average unit production costs.⁴ New entrants thus have to enter on a sufficiently large scale to avoid diseconomies (Harrigan, 1981; Scherer, 1973). This also increases the risk of entry because expected profits need to be higher than the sunk costs of entry to be profitable and these unrecoverable costs will be lost if the entry fails (Baumol and Willig, 1981). Thus, large initial capital requirements and substantial economies of scale in sunk costs associated with fixed asset investments act as barriers to potential entrants (Bain, 1956; Harrigan, 1981; Baumol and Willig, 1981). High entry barriers, in turn, lead to market concentration, which gives rise to opportunities for extracting monopoly or oligopoly rents. Via these mechanisms, fixed asset intensity enhances MNCs' incentive and ability to pursue monopoly or oligopoly rents.

Yet firms' pursuit of these rents is not necessarily compatible with – and sometimes even contradictory to – host governments' policy objectives for redistribution, industrial protection, and antitrust regulation. Democratic institutions are likely to constrain fixed asset intensive MNCs' exploitation of monopolistic or oligopolistic rents. Electoral competition as well as a free press and the relatively low cost of political mobilization in democracies empower the public and incumbents (Dahl, 1971). Democratic leaders are thus incentivized to constrain MNCs' monopolistic or oligopolistic market positions since imperfect market competition results in consumer losses,

³See Figure 1 as well as Guriev, Kolotilin and Sonin (2011) and Wilson and Wright (2015).

⁴Sunk costs cannot be recovered, and remain even if a plant stops production. Sunk costs are thus distinct from fixed costs because the latter do not vary with output and go to zero as output drops (Baumol and Willig, 1981).

harming their constituencies (Li and Resnick, 2003, 182-183).

In contrast, relatively un-competitive elections and limited political participation in autocracies permit them to tolerate MNCs' rent-seeking behavior. However, not all authoritarian regimes are alike. We distinguish among personalist, monarchical, party, and military regimes to argue that personalist dictatorships are particularly attractive to investors in fixed assets. The political rule in these regimes is less likely to be based on power-sharing agreements made credible through formal institutions and more likely to depend on personal loyalties bought with immediate rewards and material benefits, often distributed via an elite patronage network run through the leader's family (Snyder, 1992; Bratton and van de Walle, 1994; Chehabi and Linz, 1998). Political loyalty in these contexts therefore depends on the rewards accrued from clientelistic practices and not on formal institutions that enable the dictator to make credible promises about his future behavior or that allow broad access to decision-making (Wright, 2008). Instead, leaders in personalist dictators maintain their power by extracting rents from the economy to pay supporters.

Personalist dictators' interest in extracting rents to sustain their rule and fixed asset intensive MNCs' incentive to exploit oligopolistic or monopolistic positions align with each other. Despite weak rule of law and high corruption, personalist regimes provide an attractive environment that tolerates oligopoly- or monopoly-seeking MNCs, as long as the MNCs can generate sufficient rents to be shared with the leader. Further, the lack of institutional constraints and the prevalence of family control of economic sectors in these regimes make it easier for MNCs to bribe or collude with host governments to guarantee privileged access and strike exclusive deals. For example, O'Neill (2014, 183) notes that Chinese fixed asset investment in Cambodia occurs only with the direct approval of an unchecked leader: "Hun Sen has the final say on all such [investment] projects regardless of whether they have been approved or rejected by government ministries."⁵

In such cases, MNCs' incentives for monopoly rent extraction is likely to triumph over concerns of political risks, especially during an era in which neo-liberal economic ideas prevail and MNC-host government relations are often cooperative (Eden, Lenway and Schuler, 2005; Wilson and Wright, 2015, 9). Indeed, O'Neill (2014, 184) concludes that Chinese firms – particularly SOEs with fixed assets – invest in Cambodia despite the political risks: "[t]he political risk, weak rule of

⁵Hun Sen's personalist rule is based on "family ties, constructed through arranged marriages" that form "Cambodia's somewhat opaque ruling coalition" (O'Neill, 2014, 183).

law and high corruption resulting from Cambodia’s political institutions create a poor investment environment.”⁶ Therefore, we hypothesize that:

Hypothesis: *All else equal, compared to other regimes, personalist dictatorships are more attractive to investors with a high level of fixed asset intensity.*

Conversely, mobile asset investments involve low sunk costs, and thus relatively lower entry barriers than fixed asset intensive investments. Given low entry barriers, there are more incumbent firms and potential entrants, contributing to higher market competition. Therefore, opportunities for firms to exploit oligopolistic or monopolistic market positions are low. Further, investors in mobile assets still retain substantial bargaining power ex post by leveraging exit options. In such cases, mobile asset investors would favor an institutional environment that protects property rights and constrains government’s opportunistic behavior. Thus we expect the personalist dictatorships should not receive more FDI in sectors dominated by mobile assets.

4 Empirical Analysis

To test our hypotheses, ideally we would like FDI data decomposed into liquid and illiquid assets. However, MNCs’ fixed capital expenditure data are difficult to obtain and thus do not exist except for majority-owned foreign affiliates of U.S. MNCs. The World Bank, IMF, and UNCTAD report FDI data at an aggregate level as either flows or stocks. As an alternative, we follow the classic “obsolescing bargain” literature (Vernon, 1971, 1980) and proxy FDI’s fixed asset intensity by sector of investment – primary vs secondary. The central argument of the “obsolescing bargain” model is that high fixed asset investments in the extractive industry become sunk costs ex post and thus a hostage to the host government. On the contrary, the MNCs in the manufacturing sector characterized by relatively high mobility, changing technology, and global integration possess substantial bargaining power and are less likely to turn into an obsolescent bargain (Kobrin, 1987).⁷

⁶Private Chinese firms in the secondary sector also invest in Cambodia. However, O’Neill (2014, 191-192) argues that “investment in Cambodia’s garment sector is unique within China’s global FDI portfolio”, in part, because in markets outside Cambodia “Chinese companies do not enjoy the type of cultural and linguistic ties with large local Chinese communities that facilitate Chinese investment in Cambodia’s garment sector.”

⁷We also produce results at more disaggregated industry levels, which show that personalism is positively associated with FDI in fixed asset intensive industries but the relationship turns negative in mobile asset intensive industries.

On average, investments in the primary sector require more fixed capital than investment in the secondary sector. For instance, fixed capital expenditures account for about 9% of total assets of majority-owned foreign affiliates of U.S. MNCs in the primary sector compared to only 4% in the manufacturing sector. Thus, sector of investment, we believe, is a good proxy for fixed asset intensity.⁸

Foreign investment in fixed assets: primary sector FDI

We utilize sectoral FDI inflow data obtained from UNCTAD, which span over the years from 1980 to 2010, a period during which outright expropriation by host governments was rare (see Figure 1). However, the geographic coverage is poor. Nearly half of countries (55) in a sample with available data on *total FDI* (116) have missing data for the entire time series for sectoral data.⁹ Furthermore, the distribution of sectoral FDI is highly skewed by the presence of large outliers.¹⁰

To examine the expectation that fixed asset intensive investors favor personalist regimes, we construct the dependent variable as the cube root of primary sector FDI as a share of GDP. Since we argue that different authoritarian regimes offer distinct institutional environments to foreign investors, we use an indicator for personalist regime. The reference category is therefore all other polities, including: Party, Military, and Monarchy, and democracy.¹¹

In the regression, we also control for a battery of economic and political factors that influence FDI inflows (see e.g. Carr, Markusen and Maskus, 2001; Noorbakhsh, Paloni and Youssef, 2001; Yeaple, 2003; Jensen, 2003; Li and Resnick, 2003). They include economic development (GDP per capita, log), market size (population, log), trade openness (total trade as percent of GDP, log), economic growth rates, regime durability, and total FDI inflows into the developing world. The data on GDP per capita, population, trade openness, economic growth rates, total FDI into developing countries are from the World Bank’s *World Development Indicators*. Regime duration

See Figure 2.

⁸Analysis based on U.S. FDI data shows that fixed asset intensity is higher in personalist regimes than in democracies, though this finding relies on limited data from three personalist regimes (Peru, Russia, and Venezuela).

⁹See the Appendix for a discussion of the sample and estimates that employ a Heckman model to address concerns about sample selection.

¹⁰We offer a full discussion of how we address distributional issues in the FDI variable in the Appendix. We account for negative values and those less than zero by using the following formula: $FDIGDP_{s,i,t} = (|FDI_{s,i,t}/GDP_{i,t}|)^{1/3}$ where s is the sector, i is the country, and t is the calendar year. We then multiply $FDIGDP_{s,i,t}$ by -1 when $FDI_{s,i,t}$ is less than zero.

¹¹In robustness tests, we show that the finding for Personalist regime remains when including Party, Military, and Monarchy indicators, leaving democracy as the reference category.

is the natural log of the years the regime has been in power, from Geddes, Wright and Frantz (2016). Civil conflict incidence data come from the UCPD/PRIO Armed Conflict Dataset (Gleditsch, Wallensteen, Eriksson, Sollenberg and Strand, 2002; Themnér and Wallensteen, 2014). The specification also includes a measure of past expropriation, from Kobrin (1984) and Hajzler (2012). This variable measures the number of expropriations in the prior 8 years using an exponentially weighted moving average.

To account for natural resource endowments, which influence both the incidence of personalist rule and sectoral FDI, we include a measure of the mean level of oil reserves in a country prior to the start of the sample period, using data from (Haber and Menaldo, 2011). By design, this variable cannot be endogenously determined by observed FDI during the sample period and does not reflect a post-treatment effect because it measures reserves prior to the observation of regime type. We believe it is a plausible cross-sectional measure of resource endowments. The specification also includes geographic region effects.¹² Finally, the specification includes a variable for personalist regime, with all other regimes (including democracy and non-personalist autocracies) as the reference category. We estimate a linear link with country-random effects; because the data show serial correlation we employ a random effects estimator that allows for autoregressive errors.¹³

The first column of Table 1 reports the results of the baseline model of primary sector FDI. The estimate for *Personalist* is positive and statistically significant. As expected, the estimates for oil reserves and regime longevity are also positively correlated with primary FDI, while past expropriations are associated with less primary FDI.

A positive correlation between personalist regimes and primary sector FDI might reflect an endogenous relationship if FDI flows shape the behavior of dictators, such as the appointment of family relatives to positions of high office or facilitating the development of corrupt resource management, that we observe and use to distinguish personalist dictatorship from other types of autocratic rule. To address this issue, we use information on how the dictatorship arose in the first place in a two-stage model. How the first leader of a new dictatorship seizes power is

¹²The region effects are the following: Americas, Asia, East Asia, and sub-Saharan Africa, with the Middle East as the reference category. We omit results for these effects in the Tables below.

¹³A Woolridge test for serial correlation rejects the null of no autocorrelation at the 0.01 level. Replication materials show that reported results remain using estimators with: HAC errors (no random effects); random effects (no error adjustment); random effects with robust clustered errors; panel-corrected standard errors that allow for panel heteroskedasticity and AR(1) errors (no random effects); and panel-corrected standard errors that allow for panel heteroskedasticity and panel-specific AR(1) errors (no random effects).

Table 1: Primary sector FDI

	OLS	2SLS-IV
	(1)	(2)
Personalist regime	0.063*	0.051*
	(0.02)	(0.02)
Expropriations	-0.022*	-0.023*
	(0.01)	(0.01)
Regime duration (log)	0.019*	0.017*
	(0.01)	(0.00)
GDP per cap. (log)	-0.033*	-0.035*
	(0.01)	(0.01)
Population (log)	0.000	-0.004
	(0.01)	(0.01)
Trade open (log)	0.021	0.015
	(0.02)	(0.02)
Annual GDP Growth	0.002*	0.002*
	(0.00)	(0.00)
Civil conflict	-0.007	-0.013
	(0.01)	(0.01)
Pre-1980 oil reserves per cap. (log)	0.016*	0.015*
	(0.01)	(0.01)
Total developing FDI	0.005	0.006
	(0.01)	(0.00)
(Intercept)	0.119	0.231
	(0.19)	(0.21)

* $p < 0.05$. 923 observations in 61 countries from 1980 – 2010. Omitted regime category is all other autocracies and *Democracy*. Region effects including but not reported. Random effects OLS with AR(1) errors. 2SLS with random effects and classical errors.

strongly correlated with the personalist regime indicator: these dictatorships are more likely to arise from uprisings and when a democratically-elected leader, such as Peru’s Alberto Fujimori, grabs power by closing democratic institutions. These scenarios – uprisings and power-grabs – indicate situations in which the new dictator is likely to bargain over initial power-sharing with a divided military or a weak political party (Geddes, Wright and Frantz, 2016). Alternatively, leaders of dictatorships that seize power as part an armed rebellion are more likely to bargain with a unified military or a cohesive revolutionary party. Similarly, leaders of regimes established by coups led by senior military officer are likely to face a unified military. More bargaining power for the dictator quickly leads to the concentration of political power in his hands – in other words, a

personalist, or ‘consolidated’, dictatorship (Svolik, 2012). Importantly, the information on how the regime seizes power is chronologically prior to the behavior of the dictator once in power. Using indicators of how the regime seizes power as an excluded instrument thus alleviates concerns about reverse causation, in which foreign investment shapes autocratic behavior once in power.

In the second column, we report the results of a two-stage instrumental variable model that uses as an excluded instrument a binary indicator of whether a dictatorship seized power in an uprising or power-grab.¹⁴ We discuss the model diagnostics in detail in the Appendix, but note that the first-stage F-statistic is 20, indicating a strong instrument. The estimate for personalism in this model is almost identical to the estimate in column 1. If we believe information on how a dictatorship seizes power is exogenous to FDI flows, then we can interpret this result as causal, given the limitation of the small size of the sectoral FDI sample.

Robustness tests Table 2 reports results from a series of robustness tests. The model in the first column uses a robust regression estimator to reduce the influence of outlier observations; the second employs a measure of primary sector FDI that is not denominated by GDP (Li, 2009*b*; Li, Owen and Mitchell, 2016). The model in the third column includes the lagged dependent variable as well as the lagged values of all the explanatory variables (Glynn and Quinn, 2013); this test estimates whether personalist regimes are associated with larger changes in the flow of primary FDI. The fourth reports results from a model that includes a non-linear time trend. The fifth column model specification omits all control variables save expropriations and regime duration. The sixth column adds non-primary FDI to the specification, while the seventh adds other autocratic regime types (Military, Monarchy, and Party). Results from this latter specification show that Personalist regimes attract more primary FDI than *democracies* while other autocracies attract less than *democracies*. The final column uses the personalism index discussed earlier in place of the personalist regime dummy variable.¹⁵ We can see that our results are robust and consistent across different model specifications.

¹⁴The reported result employs classical standard errors. However, cluster-robust standard errors increase the estimated standard error from 0.0246 to 0.0295, meaning the estimate is only statistically different from zero at the 0.08 level. All 2SLS models use Baltagi’s EC2SLS random-effects estimator, which is more efficient in small samples.

¹⁵The Appendix reports tests using further transformations of the main dependent variable and when modeling oil dependence differently; discusses additional tests for the 2SLS-IV estimator, and discusses approaches for dealing with influential observations.

FDI in the secondary sector

Our main expectation states that FDI in the *primary* sector should be higher in personalist dictatorships than in other regimes, including democracies. A further implication of our argument suggests that personalist dictatorships should *not* receive more FDI in sectors dominated by mobile assets. We test this proposition by repeating the main model specification but with secondary sector FDI instead of primary sector investment.

Table 3 reports the results. The first column reports a test for primary FDI for reference: the estimate for personalist regime is positive and statistically significant. The estimate for personalist regime in the second column, while positive, is close to zero and not statistically significant. This suggests that personalist regimes do *not* have more secondary sector FDI than democracies, which is consistent with our expectation. Further, these results show that oil reserves and regime longevity are associated with more primary FDI but not with investment in the secondary sector.

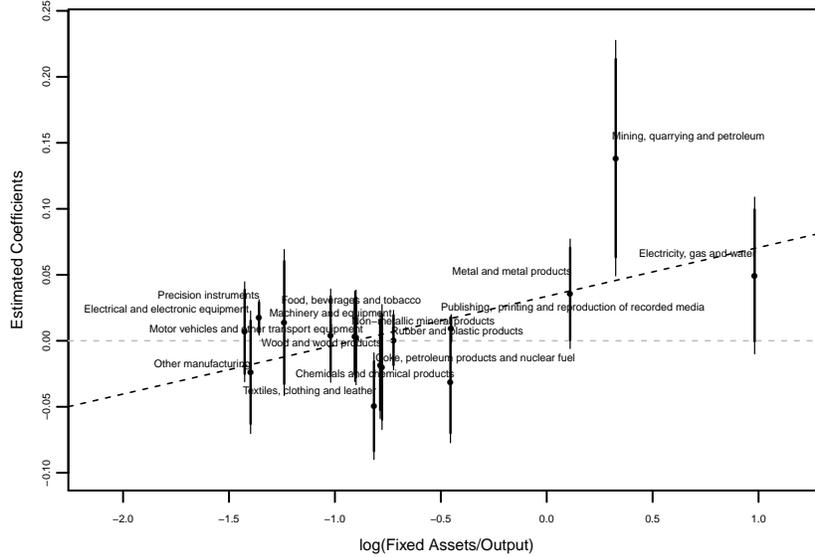
Industry-level FDI

In the previous model specifications, we focus on the broad distinction between the primary and secondary sector and use these two sectors as proxies for fixed and mobile asset intensive investments, respectively. Yet, levels of fixed assets vary even within the primary and secondary sector. For instance, metal and metal products require more investments in fixed assets than the textile industry. In this section, we explore the industry-level variation of the relationship between personalism and foreign investors. According to our theory, we should expect a positive relationship between personal dictatorships and fixed asset investments but not between the former and mobile asset investments.

We regress FDI in each of the 16 primary and secondary industries on personalism and covariates, and then plot the coefficients against industry-level fixed asset intensity.¹⁶ As shown in Figure 2, the coefficient of personalism is positive and significant in fixed asset intensive industries

¹⁶Industry-level fixed asset intensity is measured by the ratio of total fixed assets to gross output. Data is from *China Data Online*, averaged for the period of 2001–2003. Although level of fixed asset intensity of one particular industry varies across countries, the intensity ordering of different industries does not vary. Industry characteristics are largely determined by technology. In other words, the same industries are always more fixed asset intensive than others across different countries (see Nunn and Trefler, 2014, 274). In this paper, we examine whether the relationship between personalism and foreign investors differs in high and low fixed asset intensive industries. Thus, we are interested in the relative ordering of industrial-level fixed asset intensity rather than its absolute level.

Figure 2: Estimated Coefficients of Personalism across Industries



Plot of regression coefficients of personalism across industries. Vertical lines represent 95% and 90% confidence intervals. The dark dashed line is the fitted regression line of estimated coefficients over fixed asset intensity (log of fixed assets/output) at the industry level.

such as mining, quarry, and petroleum, electricity, gas, and water, and metal and metal products. It becomes much smaller and turns negative in industries with low levels of fixed assets.¹⁷ These results suggest that the affinity between fixed asset investors and personalist dictatorships is not limited to the primary sector only and it is a broader pattern that exists across sectors.¹⁸

Corruption, Governance, and Market Dynamics in Personalist Regimes

So far, we have demonstrated a strong correlation between personalist dictatorships and high foreign investment in fixed assets. Our theory suggests that this relationship is driven by a favorable institutional environment that facilitates MNCs' monopoly or oligopoly rent extraction. Thus, we should observe lower transparency and accountability, more corruption, and higher market concentration in fixed asset intensive sectors in personalist regimes. In the following sections, we examine these underlying mechanisms.

¹⁷Some coefficients of personalism in low fixed asset industries are positive, but statistically insignificant except for the precision instruments industry.

¹⁸One caveat is that the availability of FDI data varies significantly across industries. The number of observations in our model specifications range from 377 (precision instruments) to 912 (mining, quarrying and petroleum).

Corruption

In this section, we provide two pieces of evidence that suggest personalist dictatorships enable more corruption in the fixed asset resource sector. Instead of relying on data for corruption that cover all markets in a domestic economy (Treisman, 2007), we focus on two measures that more closely capture corruption in the resource sector. The first is the Resource Governance Index (RGI), which measures the level of transparency and accountability in the oil, gas and mining sectors in 58 resource-rich countries (Revenue Watch Institute, 2013). The second is the incidence of prosecutions for bribery in the oil and gas sectors under the U.S. Foreign Corrupt Practices Act (FCPA), from Mahdavi (2015).

Resource governance First, we examine the cross-sectional composite RGI that combines information from four component areas: the institutional and legal setting, reporting practices, safeguards and quality controls, and the enabling environment.¹⁹

The RGI data only exist for the year 2013 and the data on personalism only extend to 2010 so we construct a measure of the mean level of personalism for each country. We begin with cross-section, time series data on three features of personalism in dictatorships, from Geddes, Wright and Frantz (2016): whether appointment to high office in the government depends on a personal relationship with the regime leader (*officepers*); whether the regime leader appoints family relatives to position of high office in the government or military (*leaderrelative*); and whether the regime leader created his own political party during a democratic election and then subsequently “authoritarianized” the regime (*create prior party*). These variables capture two aspects of personalism central to our argument: whether individual personal relations with the dictator and his family structure elite behavior (i.e. personal cronyism) and whether the supporting political party acts as a check on the leader’s behavior.²⁰

To construct a cross-country index of personalism, we first take a linear combination the 3 items (*officepers*, *leaderrelative*, *create prior party*) and then calculate the country-mean of this variable

¹⁹Further tests in the Appendix indicate that findings for the composite measure extend to each of the component scores except reporting practices.

²⁰When dictators such as Alberto Fujimori or Hugo Chavez create personal political machines to campaign for office, they typically retain control over high-level appointments to the party and the parties therefore rarely constrain the way the leader relates to other elites. In contrast, supporting parties that arise as part of rebel groups or independence movements, such as the Vietnamese Communist Party or the Tanzanian TANU (later CCM), structure leader and elite interactions. In former case, the dictator selects the party; in the latter, the party selects the leader.

for all autocratic years up to 2010. Finally, we weight this country-mean by the share of years from 1980 (or independence) that the country had a non-democratic regime. This means that the raw Venezuela personalism index is weighted less because the country is only coded as non-democratic from 2005, while Cambodia's score is weighted more because it was coded non-democratic for all years from 1980 to 2010.

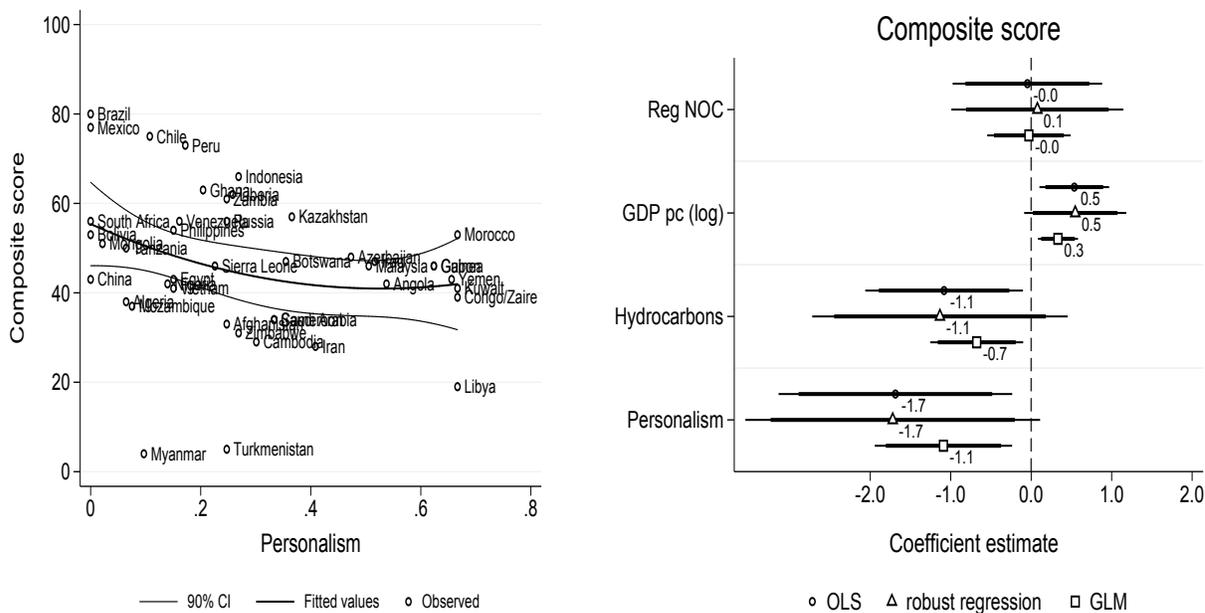


Figure 3: *Personalism and resource governance (RGI)*.

The left panel of Figure 3 plots the composite RGI score against the personalism index: there is a strong negative correlation.²¹

Because the values of the RGI index are bounded at zero and 100, we logit transform the variable for use in a linear model; log it to obtain a more normal distribution; and then standardize the variable. The conditional correlation between the personalism index and the transformed RGI score is shown in the right panel. The estimate is conditioned on a cross-sectional measure GDP per capita (log) and binary indicators of whether the main resource in the country is hydrocarbons

²¹We note one country that stands out in this pattern: Turkmenistan. Like many other post-Soviet autocracies in Central Asia, this regime inherited its ruling political party from the Soviet era; the leader therefore did not create a new party. However, unlike other autocracies in the region, the first post-independence leader was an orphan and thus did not have an extensive family to appoint to high office. Therefore, the only item in the personalist index that indicates this regime is personalist is *officepers*, lowering the overall personalist score. When we exclude Turkmenistan, the results are substantially stronger.

and whether the oil industry is governed by a regulatory nationalized oil company (NOC).²² The first reported model uses OLS with robust errors; the second uses robust regression to ameliorate concerns about outlying observations; and the third uses the raw composite score in a GLM model with logit link function. In all three tests the estimate for the personalist index is negative, while the estimate for GDP per capita is positive and that for hydrocarbons negative. This suggests that there is a negative cross-sectional correlation between personalism and resource governance, even once we account for some of the other big explanations for resource corruption in the literature (Luong and Weinthal, 2010).

Corruption prosecutions in the resource sector In this section, we examine whether personalism is associated with bribery in the oil and gas sectors, using data on prosecutions under the U.S. Foreign Corrupt Practices Act (FCPA). According to our argument, personalist dictatorships tend to tolerate market concentration and facilitate MNCs' monopoly rent extraction. Thus we should observe a high frequency of corruption involving fixed asset intensive foreign investors in these regimes. The FCPA was passed in 1977, granting authority to the U.S. Security and Exchange Commission (SEC) and the U.S. Department of Justice (DoJ) to prosecute U.S. companies or foreign organizations that trade securities in the U.S. for bribing foreign government officials and politicians. Mahdavi (2015) collects data on FCPA prosecutions in the oil and gas sectors. While the bulk of the FCPA prosecutions occur in the 2000s, we examine 73 dictatorships in 46 oil-producing countries from the year after the FCPA was passed, 1978, to 2010. We examine the incidence of these prosecutions at the country-year level since there are so few in the sample (22 total prosecution-years).

The left panel of Figure 4 shows the cross-section correlation among the 73 autocracies in the sample. The specification reported in the top estimate has only two explanatory variables: the personalism index described above and an indicator for a regulatory NOC. The second set of estimates is from a specification that adds structural covariates (level of development, population size, and oil income), while the last estimates are from a specification that includes measures of U.S. military and economic aid. The structural covariates and foreign aid variables are the regime-mean.

²²GDP data is from Maddison (2010). The hydrocarbon indicator is from Revenue Watch Institute (2013); and the indicator of regulatory NOC is from Mahdavi (2015). The NOC variable is only available for 28 countries, reducing the sample size. The Appendix shows that the reported result is robust to excluding the NOC variable and thus expanding the sample to 43 countries.

We test a model with foreign aid to account for the possibility that U.S. prosecutions are less likely for U.S. allies; in fact we find the opposite. This may reflect more corruption scrutiny for foreign governments that receive high amounts of U.S. aid. In all specifications, we find that regimes with a higher personalism score are more likely to be targets of FCPA prosecutions in the oil sector.

The right panel of Figure 4 reports results from a series of models with time-varying data on all variables, including the personalism index. One drawback of this model is dearth of regime-years in which FCPA prosecutions occur; there are only 22 among over 1000 observations. We test both an ordinary logit, a random effects logit, and an estimator designed to deal with small-sample bias when one of the outcomes is rare, a Firth logit. Again, we find that personalism is associated with a higher likelihood of corruption cases in the oil sector. The Appendix shows this result remains when estimating year fixed-effects to account for the strong time trend in the FCPA corruption data, as well as when we restrict the analysis to the period from 2006 – 2010 when most of the corruption cases are prosecuted.

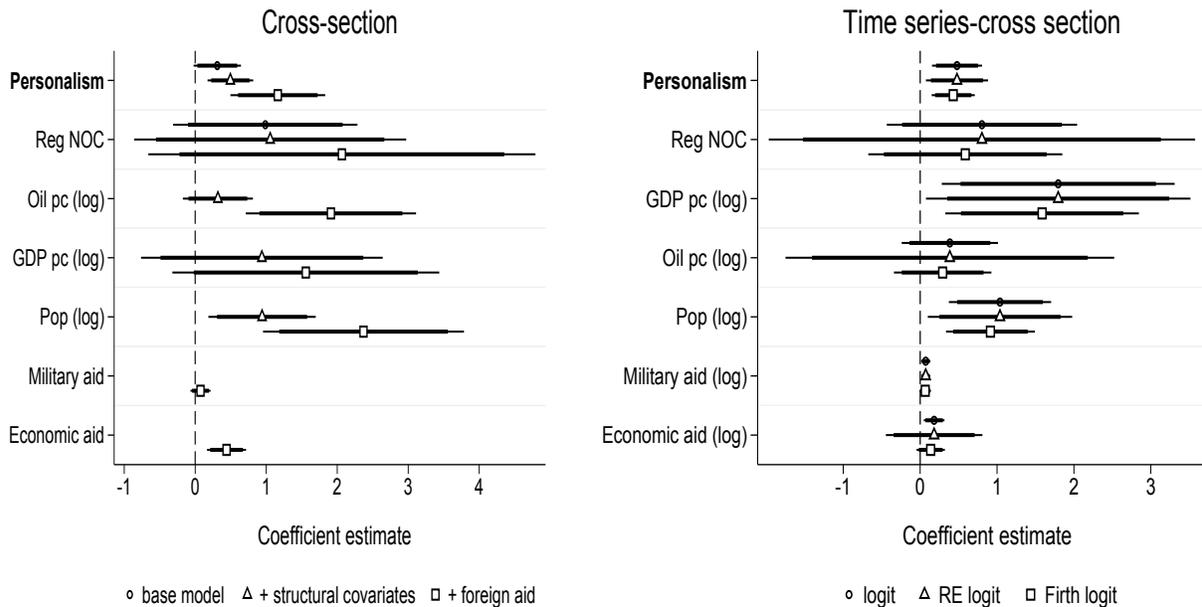


Figure 4: *Personalism and FCPA corruption cases.*

Export concentration

Our argument also suggests that compared to other regimes, personalism is associated with more concentrated market structures in fixed asset intensive sectors. To examine whether personalist dictators indeed tolerate monopolistic or oligopolistic market structures, ideally we would like detailed firm-level data across different industries for a large sample of countries. However, such data is extremely hard to come by. Alternatively, we utilize a country’s export profile as a proxy for its market structure. Although export concentration is not the same as market concentration, it should reflect the underlying market dynamics in the country. We obtained detailed commodity trade data from UN Comtrade and calculated the Herfindahl-Hirschman Index (HHI) of each country-year’s primary and secondary exports using 2-digit commodity export data.²³ The two HHI indicators are used as a measure of export concentration in the primary and secondary sector.

Because this index is bounded by 0 and 1, we logit transform it for use in a linear model. Tests indicate the presence of autocorrelation in the panel data so we employ a model with an AR1 error structure. The reported specifications control for the size of the market (log GDP and log population) as well as GDP per capita and trade openness. We also condition the estimates on current oil rents per capita to capture the effect of past investment – which yields current resource production – and thus influences the composition of exports. To account for unmodeled time-invariant differences between economies from different geographic regions, such as distance to advanced economy markets, we include region fixed effects. We include four indicator variables for autocratic regime type (*Personalist*, *Party*, *Military*, and *Monarchy*), with democracy as the reference category.

Figure 5 reports the results for export concentration models in the primary and secondary sectors. The top estimate for each variable is for the primary sector, while the bottom estimate is for the secondary one; the thick lines represent the 90 percent confidence intervals and the thin lines indicate the 95 percent intervals.²⁴ For the primary sector, personalist regimes have higher average export concentration than democracies, while monarchies and party regimes have lower concentration. The negative finding for monarchies might be surprising. However, the estimate

²³ $HHI = \sum_{i=1}^N s_i^2$, where s_i the export share of commodity i in the primary or secondary sector.

²⁴ For ease of interpretation, we omit estimates of region indicators and structural covariates (GDPpc, GDP, population, and trade).

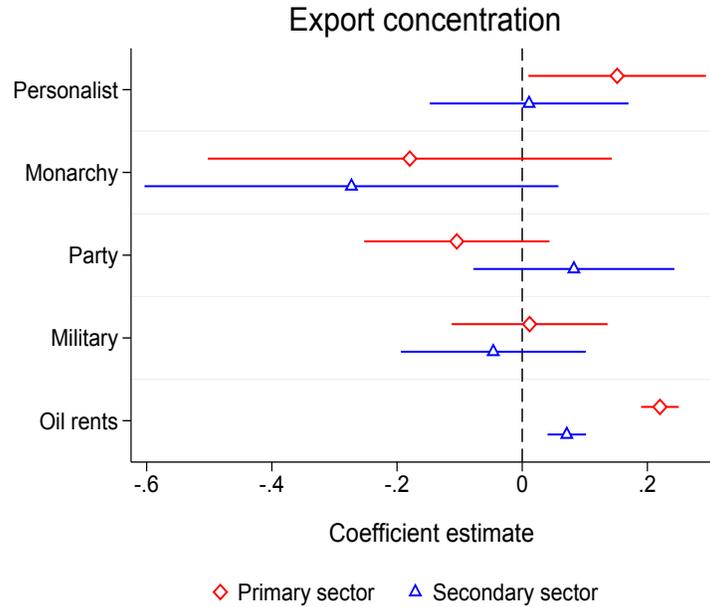


Figure 5: *Personalism and export concentration.*

for monarchies is positive and significant if we omit the region effects from the specification, while the estimate for personalist regimes remains positive and significant. In the secondary sector, there is no strong pattern for regime type, though again monarchies have lower concentration in the reported model with region effects. Finally, oil rents are positively associated with export concentration in both sectors but more so in the primary sector. The finding indicating higher primary export concentration in personalist dictatorships remains when we model random effects, use panel corrected errors, drop control variables, or omit the oil variable. These results are consistent with our argument that personalist dictatorships tolerate more market concentration than other regimes.

Taken together, these results provide strong support to our argument that personalist regimes are associated with poorer governance, more corruption, and higher market concentration in fixed asset intensive sectors. In this sense, these regimes provide an attractive institutional environment for foreign investments in fixed assets that seek monopoly or oligopoly rents.

5 Conclusion

A central question in the political economy of FDI literature asks how political institutions influence FDI inflows. Scholars have provided competing theories, and empirical results to date are inclusive. We advance the literature by differentiating both foreign investors and autocratic regimes. We propose a novel theory that emphasizes the role of fixed assets in shaping firms' preferences for institutional environments. The extant literature focuses primarily on one aspect of fixed assets – ex post immobility – and the vulnerability to host government's opportunistic behavior, but largely overlooks another theoretically important dimension of fixed assets: high capital requirements and inherent economies of scale in such costs that act as entry barriers. High fixed asset intensity deters potential entrants and results in concentrated market structures, thus reinforcing firms' incentives for monopoly rent extraction. We posit that because personalist dictatorships typically lack de facto institutional constraints on the leader's and his family's control of key economic sectors, which in turn facilitates rent extraction, these regimes are more attractive to fixed asset investors than other dictatorships. Conversely, mobile asset investors, due to low entry barriers, face a competitive market and few opportunities for monopoly rent extraction. But they can still threaten to exit given their relatively high mobility. Investors in mobile asset sectors should therefore be less persuaded by the institutional environment in personalist regimes that facilitates rent extraction.

To test our argument, we utilize primary and secondary FDI as proxies for fixed and mobile asset investments. We show that personalist regimes have significantly more primary FDI than other political regimes, while investors in the secondary sector do not find personalist dictatorships more attractive. Furthermore, when looking at disaggregated industry-level FDI data, we find that personalism is strongly associated with more FDI in fixed asset intensive industries but this relationship turns negative in mobile asset intensive industries. These results provide evidence to support the argument that fixed and mobile asset investors prefer different institutional environments. Finally, we examine governance of the resource sector and market dynamics in different political regimes. We find that personalist dictatorships are associated with higher market concentration, lower transparency and accountability, and more corruption prosecutions in the primary sector than other regimes. These results demonstrate that personal dictatorships tolerate market concentration and monopoly rent seeking, thereby providing a favorable institutional environment

for fixed asset investors.

Future research can look further into the relationship between distinct political regimes and different types of foreign investors. We show that firms' fixed asset intensity shapes investors' preferences for institutional environments. Yet MNCs also differ greatly in other factors such as technology sophistication, R&D intensity, skill profiles, marketing and advertising expenditure levels – all of which can influence their choice of institutional environments in order to make most use of their firm-specific assets. High-tech and R&D intensive MNCs, for instance, are likely to favor high quality institutions that are associated with strong rule of law and encourage citizens' investment in human capital – two factors crucial to capitalize on these types of investments. Thus it is important to examine other firm characteristics – not just ex post immobility – to understand how they shape investment location choice. One key message from this article is that different political regimes offer distinct institutional settings that are attractive to different types of foreign investors.

Table 2: Robustness tests

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Personalist	0.052*	2.404*	0.036*	0.063*	0.063*	0.064*	0.060*	0.063*
	(0.01)	(1.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Expropriations	0.048*	-1.600*	-0.021*	-0.022*	-0.019*	-0.022*	-0.022*	-0.022*
	(0.01)	(0.41)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Regime duration (log)	0.008*	0.520*	0.008*	0.019*	0.020*	0.019*	0.021*	0.017*
	(0.00)	(0.25)	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
GDP per cap. (log)	-0.035*		-0.017*	-0.034*		-0.033*	-0.032*	-0.033*
	(0.00)		(0.00)	(0.01)		(0.01)	(0.01)	(0.01)
Population (log)	-0.003	1.547*	0.000	0.001		0.001	-0.000	-0.002
	(0.00)	(0.65)	(0.00)	(0.01)		(0.01)	(0.01)	(0.01)
Trade open (log)	-0.014	0.782	-0.006	0.023		0.021	0.020	0.015
	(0.01)	(0.89)	(0.01)	(0.02)		(0.02)	(0.02)	(0.02)
Annual GDP Growth	0.002*	0.109*	0.002*	0.002*		0.002*	0.002*	0.002*
	(0.00)	(0.03)	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)
Civil conflict	-0.046*	-0.159	-0.017*	-0.007		-0.007	-0.008	-0.003
	(0.01)	(0.63)	(0.01)	(0.01)		(0.01)	(0.01)	(0.01)
Pre-1980 oil reserves per cap. (log)	0.011*	0.705*	0.004*	0.016*		0.016*	0.017*	0.016*
	(0.00)	(0.25)	(0.00)	(0.01)		(0.01)	(0.01)	(0.01)
Total developing FDI	0.014*	0.591*	0.004	0.012		0.005	0.004	0.007
	(0.00)	(0.26)	(0.00)	(0.01)		(0.01)	(0.01)	(0.01)
Primary FDI _{t-1}			0.631*					
			(0.04)					
Secondary FDI						-0.012		
						(0.04)		
Tertiary FDI						0.000		
						(0.04)		
Monarchy							-0.065	
							(0.05)	
Military							-0.006	
							(0.02)	
Party							-0.008	
							(0.03)	
(Intercept)	0.282*	-39.092*	0.115	0.052	0.068*	0.114	0.146	0.155
	(0.09)	(9.08)	(0.07)	(0.24)	(0.02)	(0.19)	(0.19)	(0.19)
Region effects	✓		✓	✓		✓	✓	✓
Random effects	✓		✓	✓	✓	✓	✓	✓
Robust regression	✓							
FDI <i>not</i> div. GDP		✓						
Lag DV			✓					
Time trend				✓				
Drop controls					✓			
Add other sector FDI						✓		
Add other autocratic types							✓	
Personalism index								✓

* p<0.05. 923 observations in 61 countries from 1980 – 2010; 853 observations in lag DV model in column 4. Omitted regime category is all other autocracies and *Democracy*. Region effects including but not reported. Random effects OLS with AR(1) errors.

Table 3: Sectoral FDI

	Primary	Secondary
	(1)	(2)
Personalist	0.063*	0.011
	(0.02)	(0.02)
Expropriations	-0.022*	-0.024*
	(0.01)	(0.01)
Regime duration (log)	0.019*	0.003
	(0.01)	(0.00)
GDP per cap. (log)	-0.033*	-0.003
	(0.01)	(0.01)
Population (log)	0.000	0.016*
	(0.01)	(0.01)
Trade open (log)	0.021	0.042*
	(0.02)	(0.01)
Annual GDP Growth	0.002*	0.000
	(0.00)	(0.00)
Civil conflict	-0.007	-0.002
	(0.01)	(0.01)
Pre-1980 oil reserves per cap. (log)	0.016*	-0.003
	(0.01)	(0.00)
Total developing FDI	0.005	0.012*
	(0.01)	(0.00)
(Intercept)	0.119	-0.424*
	(0.19)	(0.13)

* $p < 0.05$. 923 observations in 61 countries from 1980 – 2010. Omitted regime category is all other autocracies and *Democracy*. Region effects including but not reported. Random effects OLS with AR(1) errors.

References

- Asiedu, Elizabeth and Donald Lien. 2011. "Democracy, Foreign Direct Investment and Natural Resources." *Journal of International Economics* 84(1):99–111.
- Bain, Joe Staten. 1956. *Barriers to New Competition, Their Character and Consequences in Manufacturing Industries*. Cambridge: Harvard University Press.
- Baumol, William J. and Robert D. Willig. 1981. "Fixed Costs, Sunk Costs, Entry Barriers, and Sustainability of Monopoly." *The Quarterly Journal of Economics* 96(3):405–431.
- Biglaiser, Glen and Joseph L. Staats. 2010. "Do Political Institutions Affect Foreign Direct Investment? A Survey of U.S. Corporations in Latin America." *Political Research Quarterly* 63(3):508–522.
- Blanton, Shannon Lindsey and Robert G. Blanton. 2009. "A Sectoral Analysis of Human Rights and FDI: Does Industry Type Matter?" *International Studies Quarterly* 53(2):469–493.
- Boix, Carles and Milan W. Svobik. 2013. "The Foundations of Limited Authoritarian Government: Institutions, Commitment, and Power-Sharing in Dictatorships." *The Journal of Politics* 75(02):300–316.
- Bratton, Michael and Nicolas van de Walle. 1994. "Neopatrimonial Regimes and Political Transitions in Africa." *World Politics* 46(4):453–489.
- Busse, Matthias and Carsten Hefeker. 2007. "Political Risk, Institutions and Foreign Direct Investment." *European Journal of Political Economy* 23(2):397–415.
- Carr, David L., James R. Markusen and Keith E. Maskus. 2001. "Estimating the Knowledge-Capital Model of the Multinational Enterprise." *The American Economic Review* 91(3):693–708.
- Caves, Richard E. 1996. *Multinational Enterprise and Economic Analysis*. 2nd ed. Cambridge; New York: Cambridge University Press.
- Chehabi, H. E. and Juan J. Linz. 1998. *Sultanistic Regimes*. Baltimore, MD: The Johns Hopkins University Press.
- Choi, Seung-Whan and Yiagadeesen Samy. 2008. "Reexamining the Effect of Democratic Institutions on Inflows of Foreign Direct Investment in Developing Countries." *Foreign Policy Analysis* 4(1):83–103.
- Dahl, Robert A. 1971. *Polyarchy: Participation and Opposition*. New Haven, C.T.: Yale University Press.
- Duetsch, Larry L. 1984. "Entry and the Extent of Multiplant Operations." *The Journal of Industrial Economics* 32(4):477–487.
- Dunning, John H. 1981. *International Production and the Multinational Enterprise*. London: Allen & Unwin.
- Dunning, John H. 1988. "The Eclectic Paradigm of International Production: A Restatement and Some Possible Extensions." *Journal of International Business Studies* 19(1):1–31.

- Eden, Lorraine, Stefanie Lenway and Douglas A. Schuler. 2005. *From the Obsolescing Bargain to the Political Bargaining Model*. New York: Cambridge University Press pp. 251–272.
- Gandhi, Jennifer and Adam Przeworski. 2006. “Cooperation, Cooptation, and Rebellion under Dictatorships.” *Economics & Politics* 18(1):1–26.
- Geddes, Barbara. 2003. *Paradigms and Sand Castles: Theory Building and Research Design in Comparative Politics*. Ann Arbor, M.I.: University of Michigan Press.
- Geddes, Barbara, Joseph Wright and Erica Frantz. 2016. “How Dictatorships Work.”. Book manuscript.
- Gehlbach, Scott and Philip Keefer. 2012. “Private Investment and the Institutionalization of Collective Action in Autocracies: Ruling Parties and Legislatures.” *The Journal of Politics* 74(02):621–635.
- Geroski, P. A. 1995. “What Do We Know about Entry?” *International Journal of Industrial Organization* 13(4):421–440.
- Gleditsch, Nils Petter, Peter Wallensteen, Mikael Eriksson, Margareta Sollenberg and Håvard Strand. 2002. “Armed Conflict 1946-2001: A New Dataset.” *Journal of Peace Research* 39(5):615–637.
- Glynn, Adam N. and Kevin M. Quinn. 2013. “Structural Causal Models and the Specification of Time-Series Cross-Section Models.”. Working Paper, Available at <http://scholar.harvard.edu/aglynn/publications/structural-causal-models-and-specification-time-series-cross-section-models>.
- Guriev, Sergei, Anton Kolotilin and Konstantin Sonin. 2011. “Determinants of Nationalization in the Oil Sector: A Theory and Evidence from Panel Data.” *Journal of Law, Economics & Organization* 27(2):301–323.
- Haber, Stephen and Victor Menaldo. 2011. “Do natural resources fuel authoritarianism? A reappraisal of the resource curse.” *American political science Review* 105(01):1–26.
- Hajzler, Christopher. 2012. “Expropriation of foreign direct investments: sectoral patterns from 1993 to 2006.” *Review of World Economics* 148(1):119–149.
- Harrigan, Kathryn Rudie. 1981. “Barriers to entry and competitive strategies.” *Strategic Management Journal* 2(4):395–412.
- Henisz, Witold J. 2002. *Politics and International Investment: Measuring Risks and Protecting Profits*. Northampton, M.A.: Edward Elgar.
- Jakobsen, Jo and Indra De Soysa. 2006. “Do Foreign Investors Punish Democracy? Theory and Empirics, 1984-2001.” *Kyklos* 59(3):383–410.
- Jenkins, Barbara. 1986. “Reexamining the ”Obsolescing Bargain”: A Study of Canada’s National Energy Program.” *International Organization* 40(1):139–165.
- Jensen, Nathan M. 2003. “Democratic Governance and Multinational Corporations: Political Regimes and Inflows of Foreign Direct Investment.” *International Organization* 57(03):587–616.

- Jensen, Nathan M. 2006. *Nation-States and the Multinational Corporation: A Political Economy of Foreign Direct Investment*. Princeton, N.J.: Princeton University Press.
- Jensen, Nathan M. 2008. "Political Risk, Democratic Institutions, and Foreign Direct Investment." *The Journal of Politics* 70(04):1040–1052.
- Johns, Leslie and Rachel L. Wellhausen. 2016. "Under One Roof: Supply Chains and the Protection of Foreign Investment." *American Political Science Review* 110(01):31–51.
- Karakaya, Fahri. 2002. "Barriers to Entry in Industrial Markets." *Journal of Business & Industrial Marketing* 17(5):379–388.
- Karakaya, Fahri and Michael J. Stahl. 1989. "Barriers to Entry and Market Entry Decisions in Consumer and Industrial Goods Markets." *Journal of Marketing* 53(2):80–91.
- Kobrin, Stephen J. 1984. "Expropriation as an Attempt to Control Foreign Firms in LDCs: Trends from 1960 to 1979." *International Studies Quarterly* 28(3):329–348.
- Kobrin, Stephen J. 1987. "Testing the bargaining hypothesis in the manufacturing sector in developing countries." *International Organization* 41(04):609–638.
- Li, Quan. 2009a. "Democracy, Autocracy, and Expropriation of Foreign Direct Investment." *Comparative Political Studies* 42(8):1098–1127.
- Li, Quan. 2009b. "Outlier, Measurement, and the Democracy-FDI Controversy." *Quarterly Journal of Political Science* 4(2):167–181.
- Li, Quan and Adam Resnick. 2003. "Reversal of Fortunes: Democratic Institutions and Foreign Direct Investment Inflows to Developing Countries." *International Organization* 57(01):175–211.
- Li, Quan, Erica Owen and Austin Mitchell. 2016. "Do Democracies Attract More Foreign Direct Investment? A Meta Regression Analysis." Paper Presented at the Annual Meeting of American Political Science Association, Philadelphia, PA.
- Luong, Pauline Jones and Erika Weinthal. 2010. *Oil is not a curse: ownership structure and institutions in Soviet successor states*. New York: Cambridge University Press.
- Lust-Okar, Ellen. 2005. *Structuring conflict in the Arab world : incumbents, opponents, and institutions*. New York: Cambridge University Press.
- Magaloni, Beatriz. 2008. "Credible Power-Sharing and the Longevity of Authoritarian Rule." *Comparative Political Studies* 41(4/5):715–741.
- Mahdavi, Paasha. 2015. *The Politics of Oil Nationalizations* PhD thesis University of California, Los Angeles.
- Moran, Theodore H. 1973. "Transnational Strategies of Protection and Defense by Multinational Corporations: Spreading the Risk and Raising the Cost for Nationalization in Natural Resources." *International Organization* 27(2):273–287.
- Noorbakhsh, Farhad, Alberto Paloni and Ali Youssef. 2001. "Human Capital and FDI Inflows to Developing Countries: New Empirical Evidence." *World Development* 29(9):1593–1610.

- North, Douglass C. and Barry R. Weingast. 1989. "Constitutions and Commitment: The Evolution of Institutions Governing Public Choice in Seventeenth-Century England." *The Journal of Economic History* 49(04):803–832.
- Nunn, Nathan and Daniel Treffer. 2014. Domestic Institutions as a Source of Comparative Advantage. In *Handbook of International Economics*, ed. Gopinath Gita, Helpman Elhanan and Ken Rogoff. Vol. 4 Amsterdam: Elsevier pp. 263–315.
- O'Donnell, Guillermo A. 1978. "Reflections on the Patterns of Change in the Bureaucratic-Authoritarian State." *Latin American Research Review* 13(1):3–38.
- O'Donnell, Guillermo A. 1988. *Bureaucratic Authoritarianism: Argentina, 1966-1973, in Comparative Perspective*. Berkeley, C.A.: University of California Press.
- Oneal, John R. 1994. "The Affinity of Foreign Investors for Authoritarian Regimes." *Political Research Quarterly* 47(3):565–588.
- O'Neill, Daniel. 2014. "Playing Risk: Chinese Foreign Direct Investment in Cambodia." *Contemporary Southeast Asia: A Journal of International and Strategic Affairs* 36(2):173–205.
- Pinto, Pablo M. and Boliang Zhu. 2016. "Fortune or Evil? The Effect of Inward Foreign Direct Investment on Corruption." *International Studies Quarterly* . Doi: 10.1093/isq/sqw025.
- Resnick, Adam L. 2001. "Investors, Turbulence, and Transition: Democratic Transition and Foreign Direct Investment in Nineteen Developing Countries." *International Interactions* 27(4):381–398.
- Revenue Watch Institute. 2013. *The 2013 Resource Governance Index: A Measure of Transparency and Accountability in the Oil, Gas, and Mining Sector*. New York: Revenue Watch Institute.
- Scherer, F. M. 1973. "The Determinants of Industrial Plant Sizes in Six Nations." *The Review of Economics and Statistics* 55(2):135–145.
- Schulz, Heiner. 2009. "Political Institutions and Foreign Direct Investment in Developing Countries: Does the Sector Matter?"
- Shi, Weiyi and Boliang Zhu. 2015. "Political Regime, Policy Uncertainty, and Foreign Investment: Experimental Evidence from Chinese Firms." Paper Presented at the annual meeting of the American Political Science Association, San Francisco, CA.
- Snyder, Richard. 1992. "Explaining Transitions from Neopartimomial Dictatorships." *Comparative Politics* 24(4):379–399.
- Svolik, Milan. 2012. *The Politics of Authoritarian Rule*. New York: New York: Cambridge University Press.
- Themnér, Lotta and Peter Wallensteen. 2014. "Armed conflicts, 1946–2013." *Journal of Peace Research* 51(4):541–554.
- Treisman, Daniel. 2007. "What have we learned about the causes of corruption from ten years of cross-national empirical research?" *Annu. Rev. Polit. Sci.* 10:211–244.
- Vernon, Raymond. 1971. *Sovereignty at Bay: The Multinational Spread of U.S. Enterprises*. New York: Basic Books.

- Vernon, Raymond. 1980. *The Obsolescing Bargain: A Key Factor in Political Risk*. Houston, T.X.: Center for International Business.
- Weeks, Jessica L. 2012. "Strongmen and Straw Men: Authoritarian Regimes and the Initiation of International Conflict." *American Political Science Review* 106(02):326–347.
- Wilson, Matthew C. and Joseph Wright. 2015. "Autocratic Legislatures and Expropriation Risk." *British Journal of Political Science* FirstView(Supplement -1):1–17.
- Wright, Joseph. 2008. "Do Authoritarian Institutions Constrain? How Legislatures Affect Economic Growth and Investment." *American Journal of Political Science* 52(2):322–343.
- Yang, Benhua. 2007. "Autocracy, Democracy, and FDI Inflows to the Developing Countries." *International Economic Journal* 21(3):419–439.
- Yeaple, Stephen Ross. 2003. "The Role of Skill Endowments in the Structure of U.S. Outward Foreign Direct Investment." *The Review of Economics and Statistics* 85(3):726–734.
- Zhu, Boliang. 2012. *Essays on the Political Economy of Foreign Direct Investment* PhD thesis Columbia University. Doi: 10.7916/D8KP807C.
- Zhu, Boliang. 2016. "MNCs, Rents, and Corruption: Evidence from China." *American Journal of Political Science* pp. n/a–n/a. Doi: 10.1111/ajps.12259.

Appendix S: Summary statistics

Table S-1: Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Primary Sector FDI (% of GDP, cube root)	923	0.13	0.13	-0.28	0.78
Secondary Sector FDI (% of GDP, cube root)	923	0.15	0.10	-0.21	0.46
Personalist	923	0.13	0.34	0	1
Monarchy	923	0.06	0.23	0	1
Party	923	0.17	0.37	0	1
Military	923	0.06	0.23	0	1
Expropriations	923	0.12	0.43	0.00	6.31
Regime Duration	923	2.73	1.08	0.00	5.59
GDP Per Capita (log)	923	7.63	1.08	4.82	10.46
Population (log)	923	16.79	1.50	13.86	21.01
Trade Openness (log)	923	4.18	0.53	2.53	6.09
Growth Rate	923	4.43	4.70	-20.09	34.50
Civil Conflict Incidence	923	0.20	0.40	0	1
Oil Reserves Per Capita	923	1.80	2.33	0.00	9.14
FDI into Developing Countries (log)	923	12.14	1.10	8.91	13.45

Appendix A: Resource governance

The left plot in Figure A-1 show the added-variable plot for *Personalism* from the OLS estimate shown in the left plot of Figure 3. Here we can see that Turkmenistan is an outlier. This case can be partly explained by the unique family story of Turkmenistan’s first independence leader, Saparmurat Niyazov (Niyazow). He inherited the job at independence because the Soviet leaders selected him to be the First Secretary of the Turmken Communist Party in late 1985. The Soviet leadership selected Niyazov, in part, because “he had no significant patronage network in Turkmenistan itself; he was an orphan with no moral obligations to elevate his own relatives and cronies” (?, 375).

In coding personalism for Turkmenistan, two of the three variables that indicate more personalism are coded zero because: (1) Niyazov inherited a political party at independence and did not create his own support party;²⁵ and (2) Niyazov was an orphan and therefore did not have an extended family (father, uncle, cousins, nephews) to appoint to positions of elite power in the regime. To our knowledge, Niyazov is a unique autocratic leader in the post-1946 era because he both inherited a political party and was an orphan without an extended family at the time he took office. The right plot in Figure A-1 is the same added-variable plot but without Turkmenistan; it shows an even stronger negative cross-sectional relationship between personalism and resource governance.

Last, Figure A-2 shows the model estimates from a test of the conditional correlation between personalism and the composite RGI score, using a sample of 43 countries instead of 28 countries shown in the text. These tests drop the *Regulatory NOC* variable, which is not coded for 15 non-oil producing countries, to expand the sample. The main results indicating a negative correlation between personalism and resource governance remains.

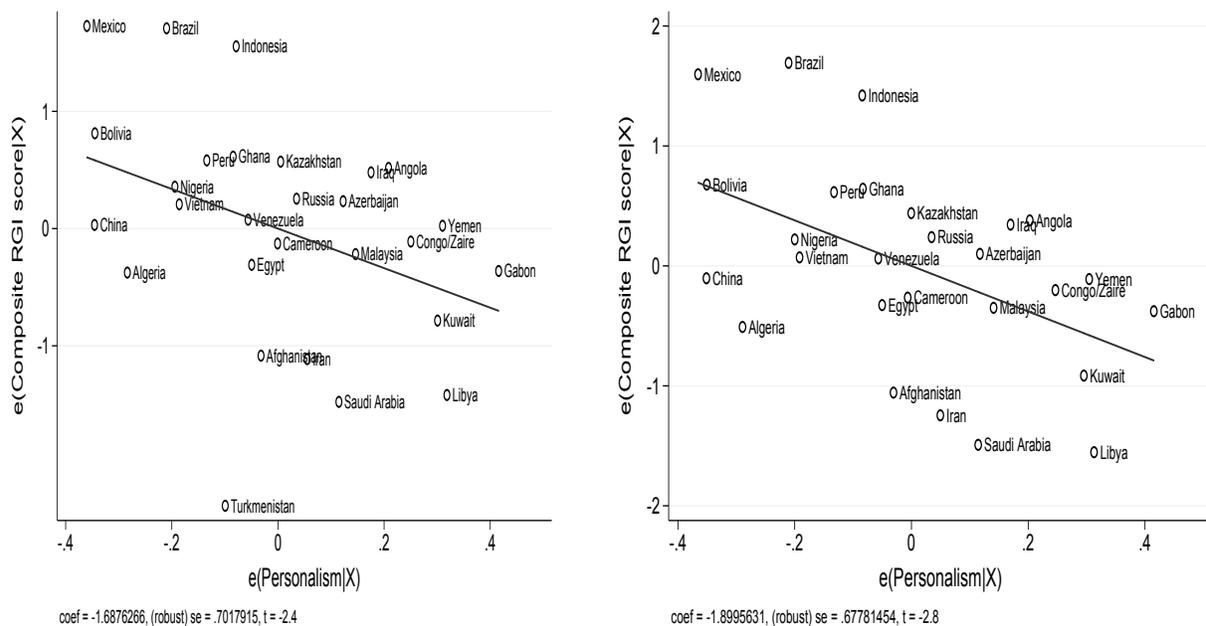


Figure A-1: *Personalism and resource governance (RGI)*.

²⁵This is true for all initial post-independence leaders in former Soviet Central Asia.

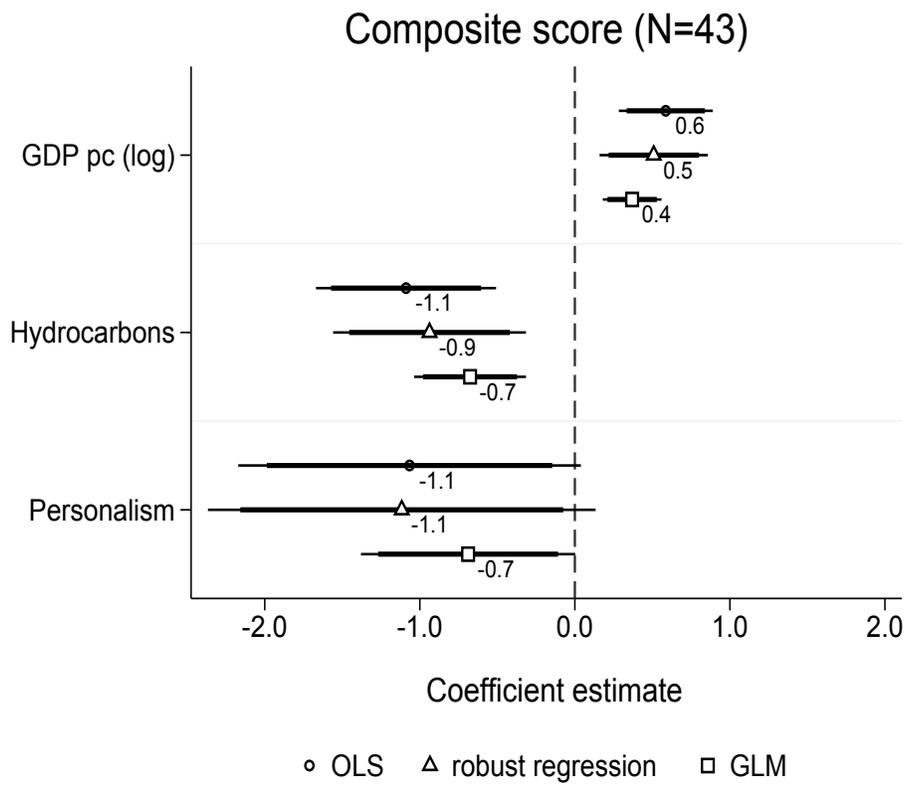


Figure A-2: *Personalism and resource governance*. These tests drop Regulatory NOC to expand sample to 43 countries.

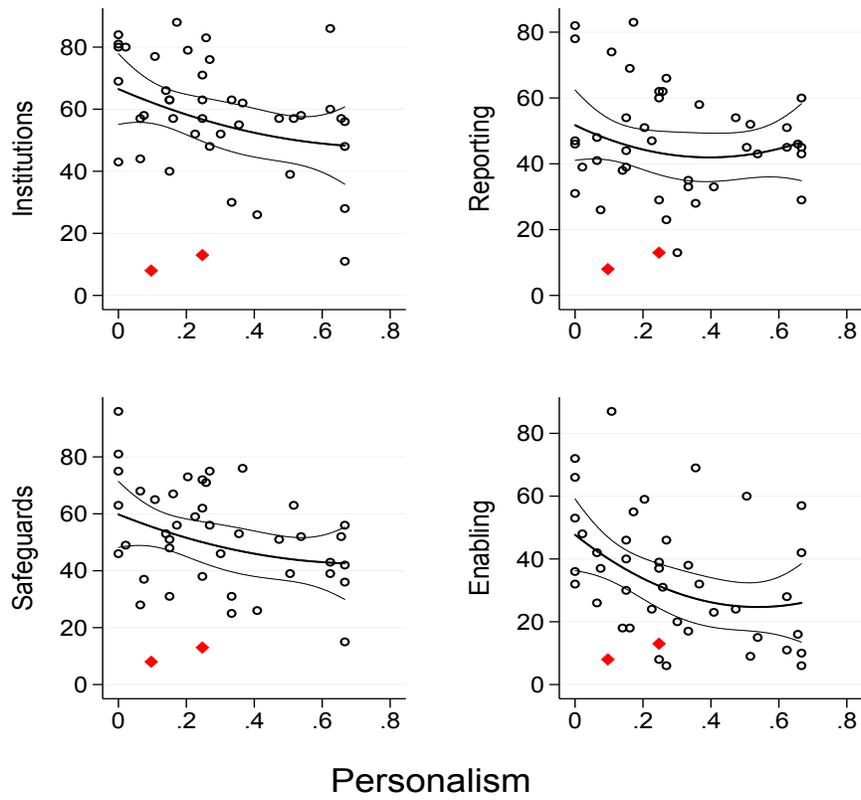


Figure A-3: *Personalism and resource governance (RGI).*

The plot in Figure A-3 show the bivariate relationship between personalism and the subcomponents of the resource governance measure. In each plot two outlying cases (in red \diamond) remain: Myanmar and Turkmenistan. The kernel regression estimates for personalism – after controlling for hydrocarbon extraction – are the following for each sub-component of the RGI score (43 cross-section observations). The correlation between personalism and the RGI score is therefore driven by two subcomponents: institutional and legal setting; and the enabling environment. The weakest correlation is between personalism and reporting practices.

Dependent variable	$\beta_{Personalism}$	s.e.
Institutional, legal setting	-0.320	(0.169)
Reporting practices	-0.078	(0.099)
Safeguards, quality control	-0.173	(0.105)
Enabling environment	-0.582	(0.244)

Appendix B: FPCA corruption

Table B-1: FPCA corruption

	Year FE		Columns 2-7: data from 2006 to 2010 only				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Personalism	0.603*	0.264	0.174	0.468*	0.500*	0.476*	0.816*
	(0.25)	(0.18)	(0.20)	(0.16)	(0.23)	(0.23)	(0.32)
Oil pc (log)	0.517		0.325	0.271	0.269	0.284	0.448
	(0.44)		(0.26)	(0.25)	(0.25)	(0.27)	(0.38)
GDP pc (log)	2.379*			1.076	1.084	1.214	1.328
	(0.86)			(0.63)	(0.64)	(0.69)	(0.70)
Pop (log)	1.316*			0.870*	0.903*	0.887*	1.321*
	(0.45)			(0.29)	(0.34)	(0.34)	(0.46)
Duration	0.002				0.100	0.007	0.499
	(0.60)				(0.51)	(0.53)	(0.65)
Reg NOC	0.948					0.441	-0.134
	(0.89)					(0.69)	(0.69)
Military aid (log)	0.086						0.131*
	(0.05)						(0.05)
Economic aid (log)	0.238						-0.044
	(0.16)						(0.15)
(Intercept)	-56.936*	-4.261*	-6.109*	-30.780*	-31.909*	-32.731*	-45.634*
	(15.94)	(1.21)	(2.09)	(7.82)	(9.83)	(10.02)	(13.98)
Log likelihood	-40.897	-47.077	-45.978	-39.034	-39.015	-38.805	-35.263

* p<0.05. Column 1: 308 observations in 44 countries from 1982– 2010. Columns 2-7: 154 observations in 33 countries from 2006 to 2010. 21 positive observations in each column. Random effects OLS.

Appendix C: Transformations of primary sector FDI

In this Appendix, we address the skewed distribution of the dependent variable. In the main manuscript, we employed the cube root transformation of the main dependent variable: *Primary sector FDI/GDP*. In this transformation, we account for negative values and those less than zero by using the following formula: $FDIGDP_{p,i,t} = (|FDI_{p,i,t}/GDP_{i,t}|)^{1/3}$ where p refers to the primary sector, i is the country, and t is the calendar year. We then multiply $FDIGDP_{p,i,t}$ by -1 when $FDI_{p,i,t}$ is less than zero. This is a standard, easily-interpretable transformation. The upper left panel of Figure C-1 shows the untransformed Primary sector FDI variable; the upper right plot shows the distribution of the log transformation of this variable. The lower panels show the cube and quadratic roots of the untransformed Primary sector FDI variable.

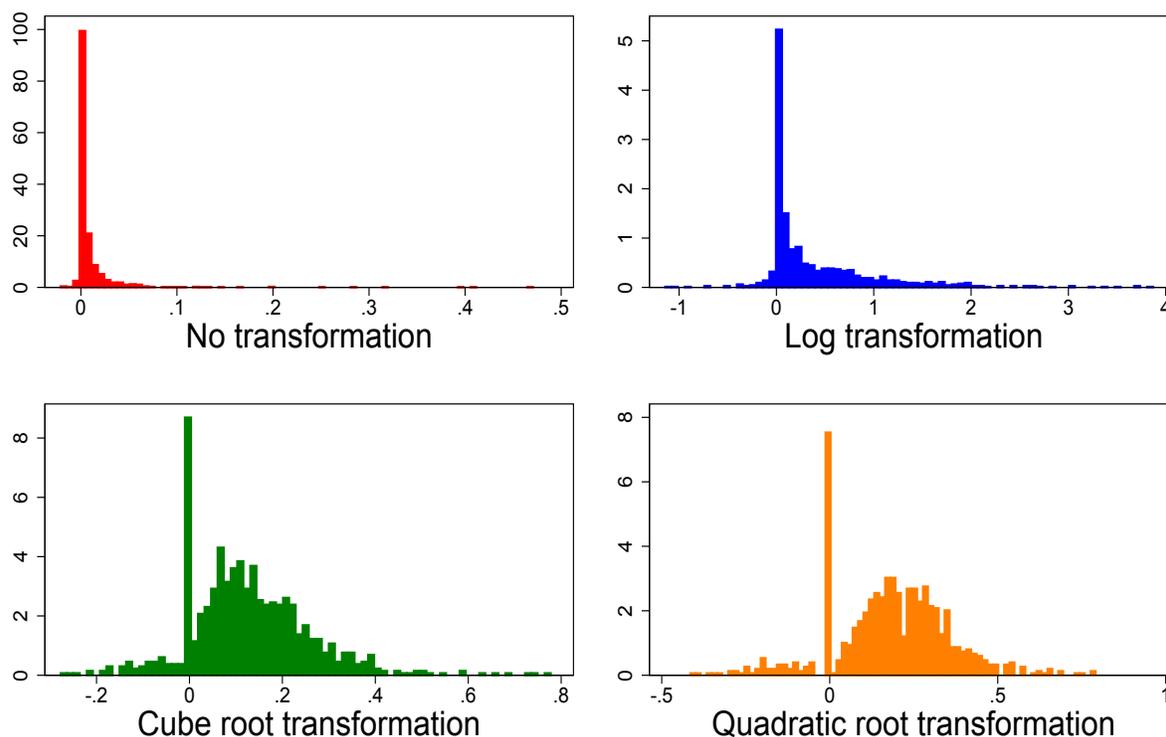


Figure C-1: *Raw and transformed distributions of Primary Sector FDI.*

Figure C-2 shows the mean level of primary FDI (as a share of GDP) by regime type, for each of the transformations. Note that the more normal distributions (cube and quadratic roots) show more equal levels of primary FDI across regime type. However, in all four cases, primary FDI is, on average, higher in personalist regimes.

In the robustness tests reported in the main text, we reported estimates from a robust regression estimator (Table 2, column 1) designed to account for outlier observations that may arise from using a dependent variable with a skewed distribution. This specification used the cube root, shown in the lower left panel.

Table C-1 shows tests for normality for primary sector FDI and various transformations. If the test statistic W is statistically different from 1, then we can reject the null that the distribution is normal. Lower V values and z -scores indicate closer to normal distributions. The untransformed variable is very far from normal; and the log transformation used in the main text is slightly better.

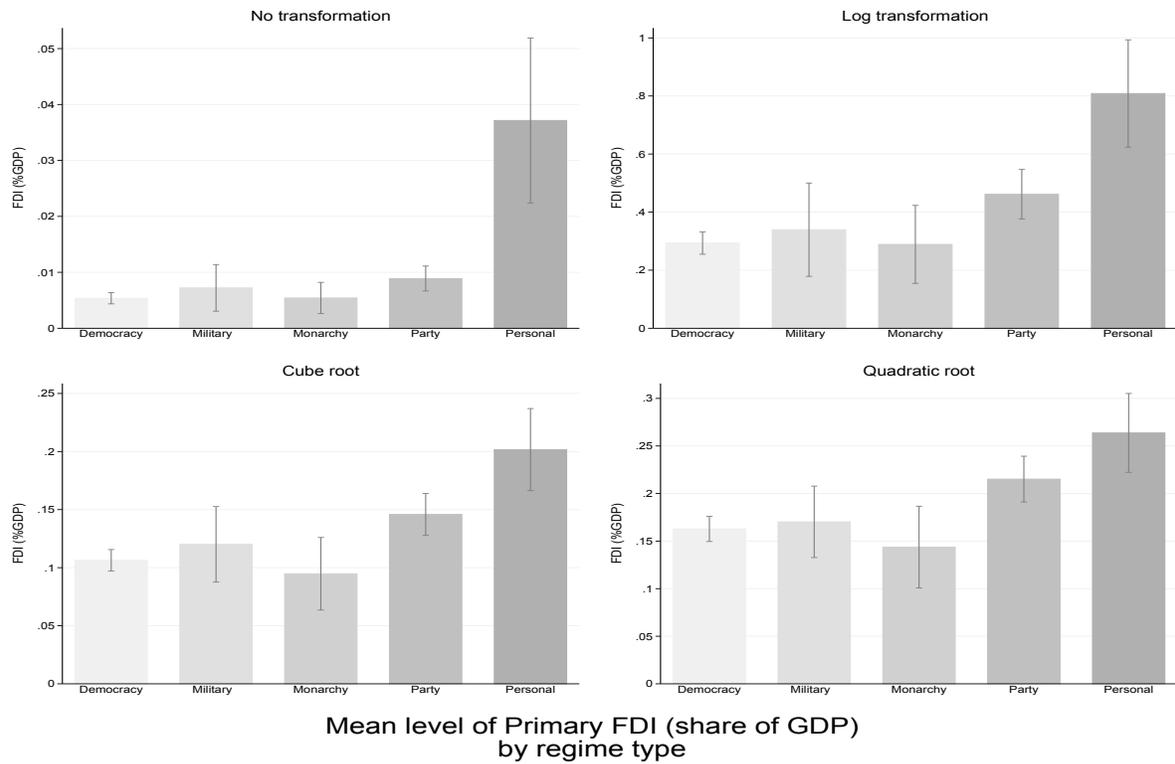


Figure C-2: *Raw and transformed distributions of Primary Sector FDI, by regime type.*

Taking the cube or quadratic root of the (absolute value of the) variable prior to applying the log transformation yields even closer to normal distributions. Table C-2 reports estimates from OLS models with random effects (and AR1 error correction) that employ each of these four distributions (note that C-1, column 3 is the same as Table 1 in the main text). The main result holds, suggesting that the cube root transformation of the dependent variable, while a reasonable choice for correcting skew, is not the only transformation that yields a significant result.

Table C-1: Shapiro-Wilk tests for normality

Transformation	W	V	z
No transformation	0.30	407	14.8
Log	0.76	141	12.2
Cube root	0.96	21.9	7.6
Quadratic root	0.99	5.6	4.2

Table C-2: Primary sector FDI transformations

	No trans.	Log	Cube	Quadratic
Personalist	0.032* (0.01)	0.277* (0.10)	0.063* (0.02)	0.075* (0.03)
Expropriations	-0.004 (0.00)	-0.048 (0.04)	-0.022* (0.01)	-0.036* (0.01)
Regime duration (log)	0.006* (0.00)	0.099* (0.02)	0.019* (0.01)	0.022* (0.01)
GDP per cap. (log)	-0.008* (0.00)	-0.159* (0.06)	-0.033* (0.01)	-0.036* (0.01)
Population (log)	0.003 (0.00)	-0.026 (0.05)	0.000 (0.01)	0.003 (0.01)
Trade open (log)	0.019* (0.00)	0.180* (0.09)	0.021 (0.02)	-0.002 (0.03)
Annual GDP Growth	0.000 (0.00)	0.008* (0.00)	0.002* (0.00)	0.003* (0.00)
Civil conflict	-0.004 (0.00)	-0.038 (0.05)	-0.007 (0.01)	-0.009 (0.02)
Pre-1980 oil reserves per cap. (log)	0.003* (0.00)	0.092* (0.03)	0.016* (0.01)	0.016* (0.01)
Total developing FDI	-0.001 (0.00)	0.026 (0.02)	0.005 (0.01)	0.018* (0.01)
(Intercept)	-0.067 (0.05)	0.368 (0.91)	0.119 (0.19)	0.090 (0.25)

* $p < 0.05$. 923 observations in 61 countries from 1980 – 2010. Omitted regime category is all other autocracies and *Democracy*. Region effects including but not reported. Random effects OLS with AR(1) errors.

Appendix D: Modeling oil and resource variables

The specifications in the main text use a (lagged) cross-sectional measure of oil reserves to account for variation in resource endowments. By design, this variable cannot be endogenously determined by observed FDI during the sample period and does not reflect a post-treatment effect because it measures reserves prior to the observation of regime type. Table D-1 reports estimates from specifications that incorporate resource endowments in a different ways. The first column keeps the oil reserves measure and adds oil price (constant). The second drops the initial oil reserves variable and substitutes the five-year lag for oil reserves. The third column includes the five-year lag of oil production from Michael Ross's data set. The final column uses all resource production (including mining) from Haber and Menaldo's data; this variable is lagged one-year to increase sample size. All of these changes to the specification yield slightly stronger results than those reported in the main text.

Table D-1: Modeling oil price

	(1)	(2)	(3)	(4)
Personalist	0.066*	0.078*	0.070*	0.078*
	(0.02)	(0.02)	(0.02)	(0.02)
Expropriations	-0.022*	-0.024*	-0.022*	-0.027*
	(0.01)	(0.01)	(0.01)	(0.01)
Regime duration (log)	0.020*	0.019*	0.019*	0.019*
	(0.01)	(0.01)	(0.01)	(0.01)
GDP per cap. (log)	-0.031*	-0.040*	-0.037*	-0.043*
	(0.01)	(0.01)	(0.01)	(0.01)
Population (log)	0.003	-0.003	-0.003	-0.010
	(0.01)	(0.01)	(0.01)	(0.01)
Trade open (log)	0.028	0.013	0.019	0.019
	(0.02)	(0.02)	(0.02)	(0.02)
Annual GDP Growth	0.002*	0.003*	0.002*	0.003*
	(0.00)	(0.00)	(0.00)	(0.00)
Civil conflict	-0.007	-0.013	-0.009	-0.013
	(0.01)	(0.01)	(0.01)	(0.01)
Total developing FDI		0.005	0.005	0.007
		(0.01)	(0.01)	(0.01)
Pre-1980 oil reserves per cap. (log)	0.015*			
	(0.01)			
Oil price	0.000			
	(0.00)			
Oil reserves _{t-5}		0.012*		
		(0.00)		
Oil production _{t-5}			0.013*	
			(0.00)	
All resources production _{t-1}				0.076*
				(0.01)
(Intercept)	0.080	0.259	0.196	0.239
	(0.19)	(0.19)	(0.19)	(0.18)
Observations	923	790	922	774

* p<0.05. 61 countries from 1980 – 2010. Omitted regime category is all other autocracies and *Democracy*. Region effects including but not reported. Random effects OLS with AR(1) errors.

Appendix E: 2SLS-IV diagnostics and robustness tests

This Appendix first introduces the excluded instrument in the two-stage least squares instrumental variables (2SLS-IV) tests, then demonstrates the correlation between the excluded instrument and the potentially endogenous variable, and finally reports the results of 2SLS-IV robustness tests.

Estimates from a naive model testing the influence of political regimes on foreign investment may be biased from reverse causation because investors may shape autocratic behavior, such as the appointment of family relatives to positions of high office or corrupt resource management. If FDI inflows facilitate this behavior and we then use this information to distinguish personalist dictatorship from other types of autocratic rule, a correlation between personalism and FDI may be biased. To address this issue we turn to a 2SLS-IV approach.

The excluded instrument uses information about how the first leader of the autocratic regime seized power to construct a binary indicator of whether he seized power in: an uprising or was a democratically-elected leader who later closed political institutions to establish an autocracy – what we call ‘power-grabs’. An autocratic regime that seized power in one of these ways is coded as a *Divided seizure*. Since all democracies are not dictatorships, this variable is coded 0 for these observations. Importantly, the coding of how a dictatorship arose in the first place does not use any information from the behavior of the dictator or regime once in power. The seizure of power information is chronologically and causally prior to the behavior of the dictator once in power. To the extent that features of the seizure event (i.e. the coup or rebellion that brought the dictatorship to power) do not independently influence the composition of subsequent investment – except through its effect on regime type – the excluded instrument is can be treated as plausibly exogenous to investment.

The logic for using this variable stems from an argument about how dictatorships become personalist regimes: more initial bargaining power for a dictator leads to the subsequent concentration of political power in his hands. As ?, Chapter 3 shows, a high level of initial bargaining power for a dictator means he has more information about when he reneges on a power-sharing agreement by taking more power than promised from elites in his coalition: while the dictator knows how much he’s taking from the elites, the elites with which he bargains can only imperfectly observe his actions. Thus the dictator can renege on a power-sharing deal and the ruling coalition will not know for sure if he’s reneging or complying. Svobik’s model shows how successful power-grabs by the dictator can endogenously yield what he calls an established dictatorship, where the elite cannot credibly threaten to oust the dictator and thus cannot deter his opportunistic behavior. While Svobik names these dictatorships “established”, they are analytically equivalent to personalist regimes: the leader has successfully consolidated power over elites in the military and the supporting political party. The key parameter for whether an “established” dictatorship endogenously emerges from repeated bargaining between the leader and the elites in his coalition is the *initial level of power*: more initial power in the hands of the leader makes it more likely he successfully grabs power in the next iteration of the game.

Our excluded instrument attempts to capture this *initial level of power*. Uprisings and power-grabs indicate situations in which the dictator is likely to initially bargain over power-sharing with a divided military or a weak political party (?). In contrast, leaders of dictatorships that seize power as part a senior-officer coup or an armed rebellion are more likely to bargain with a unified military or a cohesive revolutionary party.

Table E-1 shows the bivariate correlation between the endogenous explanatory variable, Personalist, and a binary indicator of seizure type. In the main estimating sample of 923 observations, 48 percent of observations in which the regime seized power in an uprising or post-election power-grab were personalist dictatorships. In contrast, for regimes that did not come to power in one of these

ways (including democracies), only 9 percent of observations are personalist. These percentages suggest a strong correlation between these two variables. This can also be seen in an added-variable plot from the first stage of the 2SLS-IV model, which is the linear probability model reported in the first column of Table E-2. The first-stage F-statistic is 20.8, which is well above the conventional rule of thumb of 10. Figure E-1 shows the conditional correlation, given the other explanatory variables in the model.

Table E-1: Personalist regime and seizure type

	Divided Seizure = 0	Divided Seizure = 1
Not Personalist	739 (91%)	60 (52%)
Personalist	69 (9%)	55 (48%)
Column total	558 (100%)	142 (100%)

The remaining columns in Table E-2 report results from 2SLS-IV robustness tests. The second column contains results from a model that uses the quadratic (instead of cube) root of the dependent variable; the third adds a non-linear time trend. The fourth column drops most control variables, while the fifth and sixth columns add other types of FDI and other autocratic regime types, respectively. The seventh column estimates the model on a sample of dictatorships only, omitting democracies. The last column uses the personalism index instead of a dummy variable for personalist regime. The estimate for *Personalist* is statistically different from zero at the 0.10 level in all models, save the latter two, which are significant at the 0.13 level. Note that all these estimates report cluster-robust standard errors.

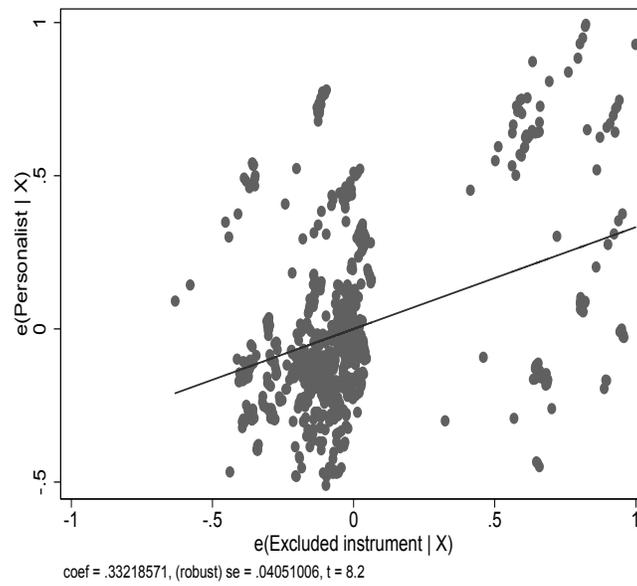


Figure E-1: *Conditional correlation between excluded instrument and Personalist regime.*

Table E-2: 2SLS-IV robustness tests

Dep. Variable	Personalist regime							
	Primary sector FDI (log) in columns 2–8							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Divided seizure	0.750*							
	(0.16)							
Personalist		0.062	0.052	0.049*	0.050	0.047	0.104	0.060
		(0.04)	(0.03)	(0.02)	(0.03)	(0.03)	(0.07)	(0.04)
Expropriations	0.029	-0.039	-0.023	-0.019	-0.022	-0.022	-0.006	-0.024
	(0.02)	(0.03)	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)	(0.02)
Regime duration (log)	0.012	0.019	0.017	0.014	0.016	0.019	0.040	0.016
	(0.02)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.02)	(0.01)
GDP per cap. (log)	-0.052	-0.031	-0.035		-0.035	-0.034	-0.054	-0.032
	(0.03)	(0.02)	(0.02)		(0.02)	(0.02)	(0.03)	(0.02)
Population (log)	-0.100*	-0.001	-0.004		-0.003	-0.005	0.012	-0.007
	(0.03)	(0.01)	(0.01)		(0.01)	(0.01)	(0.02)	(0.01)
Trade open (log)	-0.048	-0.007	0.016		0.014	0.014	0.082	0.010
	(0.04)	(0.03)	(0.02)		(0.02)	(0.02)	(0.05)	(0.02)
Annual GDP Growth	-0.001	0.003*	0.002		0.002	0.002	0.001	0.002
	(0.00)	(0.00)	(0.00)		(0.00)	(0.00)	(0.00)	(0.00)
Civil conflict	0.014	-0.015	-0.014		-0.014	-0.014	-0.014	-0.009
	(0.01)	(0.01)	(0.01)		(0.01)	(0.01)	(0.02)	(0.01)
Pre-1980 oil reserves per cap. (log)	0.043	0.014	0.015		0.016	0.017*	0.010	0.015
	(0.02)	(0.01)	(0.01)		(0.01)	(0.01)	(0.01)	(0.01)
Total developing FDI	0.015	0.017	0.013		0.005	0.005	-0.001	0.007
	(0.01)	(0.01)	(0.02)		(0.01)	(0.01)	(0.01)	(0.01)
(Intercept)	1.912*	0.161	0.164	0.086*	0.241	0.264	-0.133	0.249
	(0.60)	(0.26)	(0.24)	(0.04)	(0.21)	(0.21)	(0.35)	(0.22)
Quadratic prim. FDI		✓						
Time trend			✓					
Fewer controls				✓				
Other sector FDI					✓			
Other autocratic types						✓		
Dictatorships only							✓	
Personalism index								✓

* $p < 0.05$. 923 observations in 61 countries from 1980 – 2010. Omitted regime category is all other autocracies and *Democracy*, except columns 6 and 7. Region effects including but not reported. 2SLS random effects with cluster-robust standard errors.

Appendix F: Influential and outlier observations

In this appendix, we consider four approaches for probing the robustness of the main results for Primary FDI: (1) the Hadi, (2) Bacon, and (3) leverage methods for detecting influential observations. The first two approaches, Hadi and Bacon, help to identify influential observations in the multi-dimensional covariate space; that is, they do not focus on any particular variable, such as *Personalist*.

Figure F-1 shows the distribution of Hadi distances for each observation in the main estimating sample ($n=923$). We use this distribution to identify the (overall) most influential observations, drop them from the sample and then re-estimate the model. To compare to the full sample estimate, we remind readers that the estimate for *Personalist* is 0.063 with a standard error of 0.02. The first column of Table F-1 reports results from a model that drops the most influential observation, with a Hadi distance greater than 0.4. The sample in column 2 includes observations with a Hadi distance less than 0.25 (dropping 6), column 3 observations with a Hadi distance less than 0.15 (dropping 19); and column 4 observations with a Hadi distance less than 0.10 (dropping 35). A couple of *personalist* regimes stand out as containing highly influential observations (Azerbaijan 2002–2005, Mauritania in 2004–2005, and Venezuela 2004–2006). Importantly, the estimate of interest does not change much as we drop these observations.

The fifth column of Table F-1 reports a model that drops 9 observations identified as (overall) influential by the Bacon method. This approach excludes some observations from Azerbaijan, Kazakhstan, Russia, and Venezuela. The sixth column drops all observations from Azerbaijan and Venezuela, the two countries with the most leverage.

Finally, we re-estimate the main model dropping one country at a time.²⁶ Figure F-2 shows the distribution of the estimated coefficients for *Personalist*. Unsurprisingly the mean and median values of this distribution are almost identical to the full sample estimate of 0.0603. More interesting are the most influential countries. Excluding Mauritania yields the lowest estimate (0.033) while excluding Peru yields the highest (0.082). When we drop these two countries from the sample, as the results in column 7 of Table F-1 indicate, the estimate for *Personalist* regime substantively similar to that reported in the main text.

²⁶Results in replication files show that the main finding is strongest when dropping sample countries from the Americas and weakest when dropping sub-Saharan African countries.

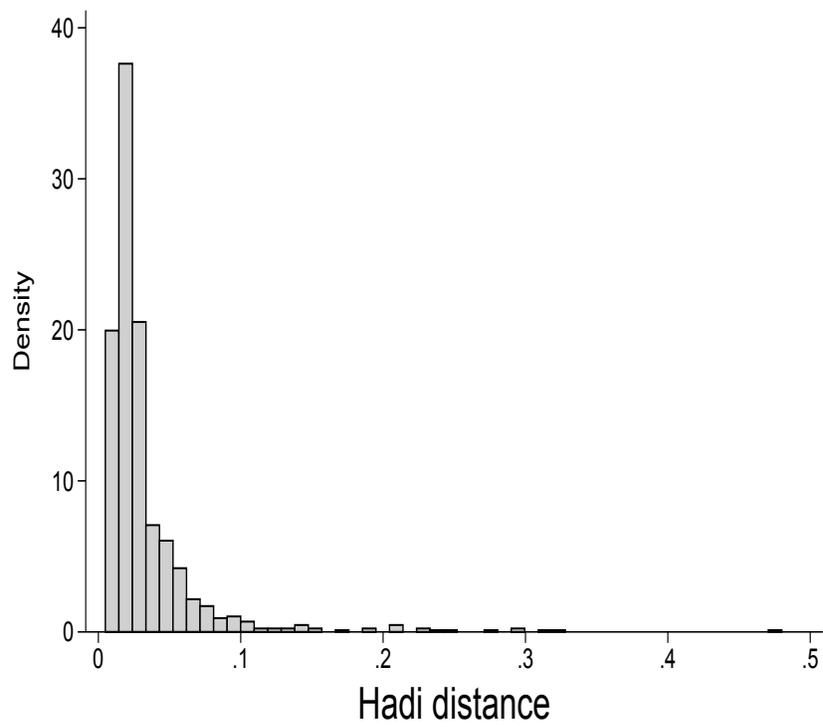


Figure F-1: *Hadi distance distribution.*

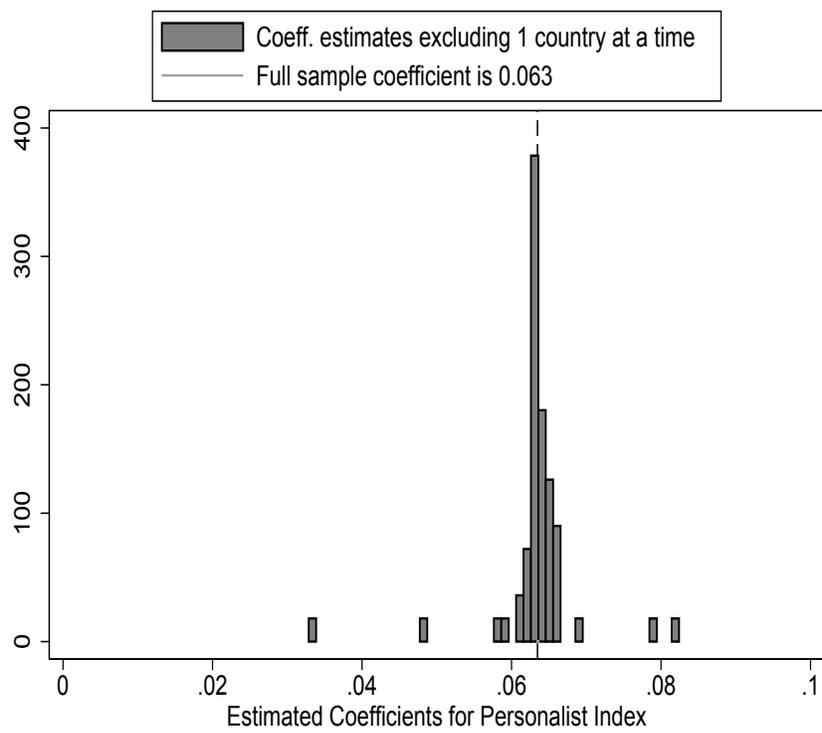


Figure F-2: *Leave-one-out estimates.*

Table F-1: Addressing influential observations

	Drop Hadi outliers (1-4)				Drop Bacon outliers	Drop Azerbaijan Venezuela	Drop Mauritania Peru
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Personalist	0.067*	0.048*	0.047*	0.048*	0.079*	0.063*	0.048
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.03)
Expropriations	-0.013	-0.005	0.002	-0.003	0.003	0.020	-0.023*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Regime duration (log)	0.018*	0.013*	0.005	0.003	0.015*	0.015*	0.010
	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)
GDP per cap. (log)	-0.033*	-0.032*	-0.028*	-0.027*	-0.032*	-0.021*	-0.030*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Population (log)	0.001	-0.002	-0.004	-0.002	0.002	0.002	-0.000
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Trade open (log)	0.021	0.011	0.006	0.012	0.020	0.010	0.012
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
Annual GDP Growth	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*	0.002*
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Civil conflict	-0.007	-0.003	-0.011	-0.012	-0.008	-0.009	-0.009
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Pre-1980 oil reserves per cap. (log)	0.015*	0.016*	0.016*	0.016*	0.015*	0.012*	0.016*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Total developing FDI	0.005	0.007	0.011*	0.012*	0.006	0.004	0.006
	(0.01)	(0.01)	(0.00)	(0.00)	(0.01)	(0.01)	(0.01)
(Intercept)	0.113	0.175	0.164	0.112	0.085	0.057	0.157
	(0.19)	(0.19)	(0.17)	(0.17)	(0.19)	(0.17)	(0.20)
Observations	922	917	904	888	914	876	880

* $p < 0.05$. 61 countries from 1980 – 2010. Omitted regime category is all other autocracies and *Democracy*, except columns 6 and 7. Region effects including but not reported. Random effects OLS with AR(1) errors.