

# Property Rights, Working Class, and Demand for Foreign Direct Investment

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## Preliminary Comments Welcome

### Abstract

This article develops a formal theoretic framework to demonstrate that foreign direct investment (FDI) inflows bring both benefits and risks to dictators. On the one hand, more FDI inflows increase domestic wages, enhancing regime stability by reducing workers' incentives to revolt. On the other hand, dictators' inability to commit to property rights protection may increase the likelihood of expropriation, leading to international arbitration and even foreign government intervention. Our theory indicates that dictators with a stronger working class or better property rights protection tend to impose fewer FDI restrictions, which are corroborated by our empirical findings. This article advances our understanding of the determinants of economic openness and the effect of foreign direct investment in authoritarian regimes.

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# 1 Introduction

While a large body of literature has examined the determinants of foreign direct investment (FDI) inflows, the question of why some dictators induce more FDI than others remains a puzzle. Indeed, previous works examining the effects of domestic institutions on FDI inflows offer mixed results (e.g., Jensen 2003; Li, Owen and Mitchell 2018; Li and Resnick 2003; Yang 2007). Relatedly, although many argue that dictators tend to impose more FDI restrictions to protect their domestic cronies from foreign competition in exchange for rents (e.g., Gao 2021; Pandya 2014), it is unclear why dictators cannot extract more rents from foreign firms by allowing them to produce onshore. Indeed, given that property rights are poorly protected and that foreign firms tend to be more efficient (Chen and Xu 2023; Jensen 2008), dictators may in fact be able to extract more rents from foreign firms (Pinto and Zhu 2016; Zhu 2017).

In this article, we argue that one important rationale for FDI restrictions under dictatorship is exactly the possibility of expropriating foreign firms. Specifically, dictators' inability to commit to property rights protection will increase the likelihood of over-expropriating foreign investors, leading to international arbitration or even foreign government intervention that could potentially overthrow the dictator. Thus, dictators may want to restrict foreign investment inflows in order to discourage foreign investors from resorting to such costly actions. However, restricting FDI inflows will also limit domestic wages, increasing workers' incentive to revolt. The result thus reveals that the availability of foreign investment poses a dilemma for dictators, who need to walk a fine line between avoiding the over-expropriation of foreign investors (foreign threats) and appeasing domestic labor (domestic threats) when choosing its FDI policies. In doing so, this article also offers an explanation for the huge variation in FDI restrictions among dictatorships as well as the mixed effects of regime type on FDI inflows.

The core mechanism of the model builds upon a model of economic production, in

which the dictator decides the amount of foreign investment allowed to produce onshore and derives its income from expropriating foreign investors' onshore investment income. Meanwhile, foreign investors need to choose the amount of capital to invest onshore (i.e., in the autocracy's domestic market) and offshore (i.e., in the international market) and derive their income from capital returns, while workers derive their income from labor returns, that is, domestic wages. To maximize their wages, workers always desire more onshore capital investment, as more investment drives up labor's marginal productivity, leading to higher wages (Pandya 2010). Meanwhile, although foreign investors' income from onshore investment is subject to expropriation by the dictator, they have the option of resorting to international arbitration or home government intervention, which enables them to retrieve their expropriated income with a cost.

The dictator's problem is complicated by the fact that it faces limitations on the share of profits they can credibly commit not to take from foreign investors, as it is always possible for the dictator to renege on promises in the future due to the lack of effective institutional constraints on its power (Chen, Pevehouse and Powers 2023; Mansfield, Milner and Rosendorff 2002). Consequently, the dictator faces the following tradeoff when choosing the level of investment restrictions. On the one hand, allowing more foreign investments onshore increases the amount of capital the dictator can expropriate from. More importantly, more onshore investment will also increase domestic wages, reducing the workers' incentives to revolt and thus the domestic threats to the dictatorial rule. On the other hand, more onshore investment will increase the possibility of over-expropriation, making foreign intervention in the form of either international arbitration or foreign government intervention a distinct possibility. Therefore, reducing foreign investment restrictions is a double-edged sword for dictators.

The framework reveals several rationales behind a dictator's policy choice over FDI restrictions that the literature has not previously assessed. First, when the working class is relatively strong or when property rights are relatively well protected, such that the

dictator's concern over domestic threats dominates concern over foreign threats, the dictator will liberalize foreign investment inflows to appease domestic workers. Second, when the working class is relatively weak or when property rights are poorly protected, such that the dictator's concern over foreign threats dominates concern about domestic threats, the dictator will restrict foreign investment inflows to reduce the likelihood of over-expropriating foreign investors.

The model thus yields two clear predictions regarding dictators' choice of FDI restrictions that we can evaluate empirically. While a higher level of property rights protection should be associated with FDI liberalization, a stronger working class should instead be associated with more FDI restrictions. Using cross-national data in the period 1997–2020, we empirically assess these predictions about FDI restrictions. The statistical results are in line with our theoretical predictions.

Our study contributes to the literature on regime type and economic liberalization by delineating a demand-side theory of economic openness. Earlier works examining the effects of domestic institutions on FDI inflows offer mixed results, with democracy having no effects (Yang 2007), negative effects (Li and Resnick 2003; Resnick 2001), or positive effects (Asiedu and Lien 2011; Busse 2003; Busse and Hefeker 2007; Jakobsen and De Soysa 2006; Jensen 2003) on FDI inflows. These past studies, however, tend to assume that all states desire high levels of inward FDI and that FDI flows are driven almost exclusively by the supply of willing investors. More recently, Pinto (2013) argues that left-wing democratic governments attract a higher level of FDI inflows thanks to workers' preference for more foreign investment, while Pandya (2014) shows that nondemocratic governments have more FDI inflow restrictions than democratic governments. Meanwhile, scholars studying FDI flows to advanced democracies find that democratic governments may restrict FDI inflows due to nationalist sentiments (Kang 1997), the potential erosion of collective bargaining power (Scheve and Slaughter 2004), or the reduction of workers' perceptions of their job security (Owen 2015).

This article advances the literature on regimes and FDI by focusing on a previously overlooked determinant of FDI flows: potential host countries' demand for FDI. We demonstrate that dictators' attitudes towards FDI may depend on two underlying factors that vary across countries, that is, the power of the working class and the level of property rights protection. In doing so, we move beyond merely looking at FDI policy differences either within advanced democracies or between democracy and dictatorship by offering a theory of why FDI policies may differ among dictatorial regimes (Bastiaens 2016).

Moreover, this research also contributes to the literature on how FDI affects authoritarian stability by theorizing both the benefits and risks of inward foreign investment. An extensive body of research has argued that FDI liberalization can bolster authoritarian stability (Arias, Hollyer and Rosendorff 2018; Okara 2023) and reduce either the likelihood of democratization (Gao 2021; Pond 2018; Shadmehr 2019) or the possibility of military coups (Bak and Moon 2016; Tomashevskiy 2017). This paper, however, demonstrates that the availability of foreign investment poses a dilemma for dictators. While allowing more FDI inflows can reduce the domestic threat to the dictatorial rule by increasing domestic wages, more FDI inflows may also increase the foreign threat to the dictatorial rule by increasing the likelihood of foreign intervention. As a result, the dictator needs to walk a fine line when deciding the level of FDI restrictions.

## 2 Model Setup

### 2.1 Markets and Production Technology

We assume a domestic economy that is competitive so that wages and returns to capital are their marginal revenue products. The production technology is Cobb-Douglas. So with  $K_I$  units of capital invested onshore ex post, the domestic production is  $K_I^\alpha L^{1-\alpha}$ , with  $\alpha \in (0, 1)$ , and  $K_I, L > 0$ .

Let  $r_d$  be the domestic returns to capital and  $w$  be domestic wages. Because domestic

markets are competitive, we have  $r_d = \alpha \left(\frac{L}{K_I}\right)^{1-\alpha}$  and  $w = (1 - \alpha) \left(\frac{K_I}{L}\right)^\alpha$ , where we normalize the output price to 1. Alternatively, capital owners can invest in foreign markets by making either direct investment or portfolio investment, e.g., treasury bonds or stocks. The rate of return to capital in foreign markets is assumed to be exogenous and is equal to  $r_f > 0$ .

## 2.2 Players and Actions

Three strategic players, a dictator  $D$ , a group of workers  $W$ , and a group of foreign capitalists  $C$ , make sequential choices in a one-shot game with the following moves: (1)  $D$  decides the amount of foreign investment allowed in the country, (2)  $W$  decides whether to revolt against  $D$ , (3)  $C$  decides the amount of capital to invest onshore, (4) depending on who is in power,  $W$  or  $D$  decides the proportion of onshore investment income to expropriate from  $C$ , (5)  $C$  decides whether to use international arbitration or lobby for its home government's intervention to retrieve its expropriated profits.

**1.  $D$ 's decision over FDI restrictions.** We assume that the country initially has no capital invested onshore. In other words, we assume the country to be poor in capital. Meanwhile, the total amount of capital owned by the foreign investors is  $K$ . Thus,  $D$  first needs to decide the maximal amount of foreign investment allowed to flow onshore,  $\bar{K}_I \in [0, K]$ .

**2.  $W$ 's revolt decision.** Observing  $D$ 's choice of  $\bar{K}_I$  and anticipating the amount of capital that will flow in under dictatorship,  $W$  decides whether to revolt against the dictator ( $a_{W,R} = 1$ ) or not ( $a_{W,R} = 0$ ). If  $W$  chooses to revolt, the working class revolt succeeds with probability  $p$ . If the revolt succeeds, the dictator will be overthrown and the country will become a democracy. In this case,  $W$  will become the policy maker and choose a new amount of foreign investment allowed to flow onshore,  $\bar{K}_{I,dem}$ . If  $W$  does not revolt or the working class revolt fails, the country remains a dictatorship and  $D$ 's choice of  $\bar{K}_I$  remains in effect. The revolt, however, is costly to the workers and will reduce  $W$ 's payoff by  $c_r$  regardless of its result.

3. *C's investment decision.* Observing the country's regime type and the restrictions imposed on the amount of capital allowed to enter the country,  $C$  decides the amount of capital to invest onshore and offshore under either dictatorship ( $K_I \in [0, \bar{K}_I], K_O = K - K_I$ ), or democracy ( $K_{I,dem} \in [0, \bar{K}_{I,dem}], K_{O,dem} = K - K_{I,dem}$ ).

4. *Expropriation decision under dictatorship and democracy.* After  $C$ 's investment decision, the policy makers under either dictatorship or democracy, i.e.,  $D$  or  $W$ , need to decide the proportion of onshore investment income to expropriate from  $C$ .

4.1. *D's expropriation decision.* We assume that property rights are not perfectly protected under dictatorship. Specifically, after  $C$ 's investment decision, Nature determines the maximum proportion of  $C$ 's onshore investment income that  $D$  can commit *not* to expropriate,  $\bar{\psi}$ , which is uniformly distributed over  $[0, \hat{\psi}]$  ex ante, i.e.,  $\bar{\psi} \sim U[0, \hat{\psi}]$ . In other words, conditional on  $\bar{\psi}$ ,  $1 - \bar{\psi}$  proportion of  $C$ 's onshore investment profits will be expropriated by  $D$  for sure. As in Paine (2021), modeling an upper bound on the proportion of profits that  $D$  can commit to sharing with the investors expresses in reduced form that dictators face limitations on the profits they can credibly commit not to take from the investors, perhaps because of possibilities to renege on promises in the (unmodeled) future due to the lack of effective institutional constraints on the dictator's power.

Meanwhile,  $\hat{\psi}$  serves as an upper bound of the proportion of profits that  $D$  can commit to let investors keep, which in reality will vary with each country's institutional constraints. For instance, Gehlbach and Keefer (2011) argue that one-party regimes may be able to commit to property rights protection by institutionalizing the ruling party, while Knutsen and Fjelde (2013) argue that monarchies are more willing to offer better property rights protection due to their relatively long time horizons for their dynasties. Thus, we think of  $\hat{\psi}$  as the level of property rights protection of the country. The higher  $\hat{\psi}$  is, the larger the proportion of profits  $D$  could potentially commit not to expropriate from  $C$ , and thus the better property rights are protected.

After learning  $\bar{\psi}$ ,  $D$  chooses the proportion of profits to let  $C$  keep,  $\psi \in [0, \bar{\psi}]$ .

**4.2. *W's redistribution decision.*** We assume that property rights are perfectly protected under democracy. Thus,  $W$  can always choose not to expropriate  $C$ 's onshore investment income at all. However, we also allow  $W$  to tax foreign investors' onshore investment income for the purpose of redistribution. Specifically, under democracy,  $W$  can choose any proportion  $\psi_{dem} \in [0, 1]$  of onshore profits for  $C$  to keep, while keeping the rest  $1 - \psi_{dem}$  proportion for redistribution, which we think of as redistributive taxation under democracy.

**5. *C's arbitration decision.*** Conditional on the amount of onshore investment and the share of onshore profits that are expropriated/taxed,  $C$  needs to decide whether to retrieve the profits through legal means ( $a_{C,R} = 1$ ), such as international arbitration or home government intervention, or stay silent ( $a_{C,R} = 0$ ). If  $C$  decides to retrieve the profits, the process will cost  $C$  an amount equal to  $c > 0$ , but it enables  $C$  to retrieve its expropriated onshore profits for sure.

Empirically, there are many cases in which the home government intervened directly on their investors' behalf besides international arbitration. For instance, the United States imposed severe economic sanctions on Peru from 1968 to 1977 in response to the expropriation of US-owned International Petroleum Company (IPC), leading to "a virtual Peruvian surrender" (Olson 1975), while France imposed economic sanctions on Tunisia from 1964 to 1966 in response to Tunisia's seizure of French-held farmland (Hufbauer, Schott and Elliott 1990). Indeed, many believe that the United States was directly involved in the overthrow of Chilean President Allende in response to his nationalization policy (Shiraz 2011).

## 2.3 Payoffs

If  $C$  does not resort to arbitration, then conditional on  $K_{I,(dem)}$  and  $\psi_{(dem)}$ , its total investment income is the income from offshore investment plus the onshore investment income



that is not expropriated, i.e.,

$$\begin{aligned} u_C(a_{C,R} = 0) &= \psi_{(dem)} \cdot r_{d,(dem)} K_{I,(dem)} + r_f K_{O,(dem)} \\ &= \psi_{(dem)} \cdot \alpha K_{I,(dem)}^\alpha L^{1-\alpha} + r_f \cdot (K - K_{I,(dem)}), \end{aligned}$$

where  $r_{d,(dem)}$  is the rate of onshore investment return under dictatorship (democracy). Meanwhile, if  $C$  resorts to arbitration, its total payoff is its investment income minus the cost that it incurs during the arbitration process, i.e.,

$$u_C(a_{C,R} = 1) = [\alpha K_{I,(dem)}^\alpha L^{1-\alpha} + r_f K_{O,(dem)}] - c.$$

For  $W$ , its payoff depends on its revolt decision as well as  $C$ 's arbitration decision. First, suppose  $W$  successfully overthrows  $D$ , then if  $C$  does not resort to arbitration,  $W$ 's payoff will be the domestic wages plus the transfers obtained from redistributive taxation, which are distributed evenly across the  $L$  units of labor, i.e.,

$$\begin{aligned} u_W(\psi_{dem} | K_{I,dem}, \text{democracy}) &= w_{dem} + \frac{(1 - \psi_{dem}) \cdot \alpha r_{d,dem} K_{I,dem}}{L} - c_r \\ &= (1 - \alpha) \left( \frac{K_{I,dem}}{L} \right)^\alpha + \frac{(1 - \psi_{dem}) \cdot \alpha K_{I,dem}^\alpha L^{1-\alpha}}{L} - c_r, \end{aligned}$$

where  $w_{dem}$  is  $W$ 's income from domestic wages under democracy,  $\frac{(1 - \psi_{dem}) \cdot \alpha r_{d,dem} K_{I,dem}}{L}$  is  $W$ 's income from redistributive taxation, and  $c_r$  is the revolt cost. Meanwhile, if  $W$ 's revolt fails, its payoff will be

$$\begin{aligned} u_W(\text{revolt fails}) &= w_d - c_r \\ &= (1 - \alpha) \left( \frac{K_I}{L} \right)^\alpha - c_r, \end{aligned}$$

where  $w_d$  is  $W$ 's wage income under dictator, and  $c_r$  is the revolt cost. Together, we obtain

$W$ 's expected payoff from revolting, i.e.,

$$\begin{aligned} EU_W(a_{W,R} = 1) &= p \cdot u_W(\psi_{dem} | K_{I,dem}, \text{democracy}) + (1 - p) \cdot u_W(\text{revolt fails}) \\ &= p \cdot \left[ (1 - \alpha) \left( \frac{K_{I,dem}}{L} \right)^\alpha + \frac{(1 - \psi_{dem}) \cdot \alpha K_{I,dem}^\alpha L^{1-\alpha}}{L} \right] + \\ &\quad (1 - p) \cdot \left[ (1 - \alpha) \left( \frac{K_I}{L} \right)^\alpha \right] - c_r. \end{aligned}$$

Similarly,  $W$ 's payoff from not revolting is just the domestic wage income under dictatorship, i.e.,

$$u_W(a_{W,R} = 0) = (1 - \alpha) \left( \frac{K_I}{L} \right)^\alpha.$$

For the dictator, either a successful working-class revolt or an arbitration will deprive it of all the economic rents that it obtains from expropriation, i.e.,  $u_D(\text{democracy}) = u_D(a_{C,R} = 1, \text{dictatorship}) = 0$ . Meanwhile, in the absence of arbitration,  $D$ 's payoff under dictatorship is equal to the rents that it obtains from expropriating  $C$ 's onshore investment income, i.e.,

$$\begin{aligned} u_D(\psi | a_{C,R} = 0, \text{dictatorship}) &= (1 - \psi) r_d K_I \\ &= (1 - \psi) \cdot \alpha K_I^\alpha L^{1-\alpha}. \end{aligned}$$

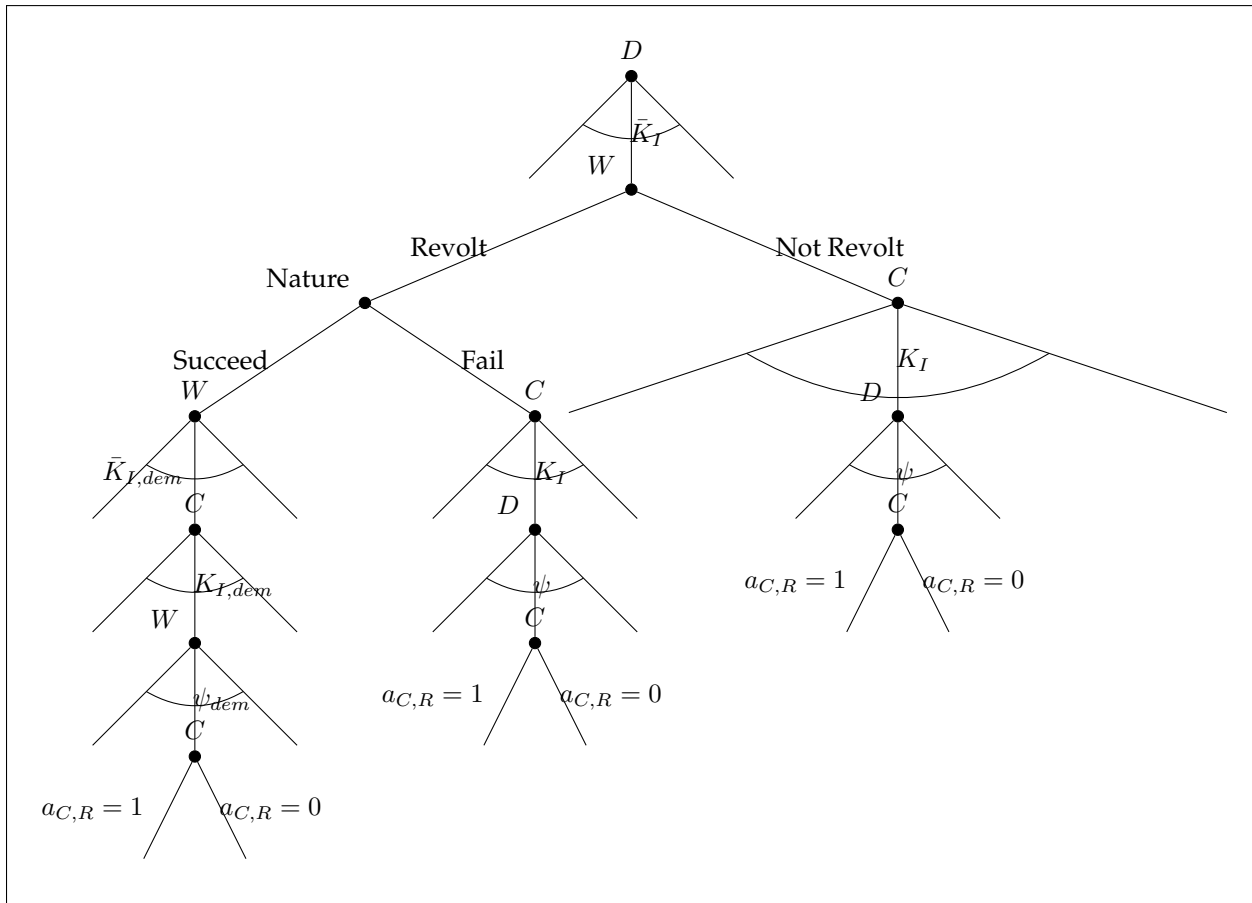
Figure 1 summarizes the sequence of moves of the game.

### 3 Analysis

The solution concept is Subgame Perfect Equilibrium. To solve the game backwards, we need to start by analyzing  $C$ 's arbitration decision conditional on expropriation and  $C$ 's onshore investment,  $K_I$ . For simplicity, we assume that the rate of offshore returns,  $r_f$ , is small enough relative to  $c$ , such that it is optimal for  $C$  to invest a positive amount of capital onshore despite expropriation and arbitration.

**Assumption 1.**  $r_f^{\frac{\alpha}{1-\alpha}} < \frac{\alpha^{\frac{1}{1-\alpha}} \cdot L \left[ \alpha^{\frac{\alpha}{1-\alpha}} - \alpha^{\frac{1}{1-\alpha}} \right]}{c}$ .

Figure 1: Game Tree



### 3.1 Arbitration

This section examines  $C$ 's arbitration decision, Notice that  $C$ 's payoff from arbitration, conditional on  $\psi$  and  $K_I$ , is

$$u_C(a_{C,R} = 1|K_I, \psi) = \alpha K_I^\alpha L^{1-\alpha} - c + r_f K_O,$$

while its payoff from no arbitration is

$$u_C(a_{C,R} = 0|K_I, \psi) = \psi \cdot \alpha K_I^\alpha L^{1-\alpha} + r_f K_O.$$

Thus,  $C$  will resort to arbitration if  $u_C(a_{C,R} = 1|K_I, \psi) > u_C(a_{C,R} = 0|K_I, \psi)$ , which occurs when the amount of onshore profits being expropriated is greater than the cost of arbitration. In other words,  $C$  will resort to arbitration only when the amount of profits it could retrieve is sufficiently large.

**Proposition 1.**  $C$  resorts to arbitration if  $1 - \psi > \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ .

### 3.2 Expropriation

In this section, we look at the country's expropriation decision under different regimes, starting with democracy. Recall that  $W$  is the policy maker in democracy and can choose any  $\psi_{dem} \in [0, 1]$ . However, whenever  $W$  over-expropriates, i.e.,  $1 - \psi_{dem} > \frac{c}{\alpha K_{I,dem}^\alpha L^{1-\alpha}}$ , foreign investors will resort to international arbitration and retrieve the expropriated profits, leaving  $W$  nothing for redistribution. Thus, conditional on  $K_{I,dem}$ , the optimal redistribution strategy for  $W$  is to take exactly  $\frac{c}{\alpha K_{I,dem}^\alpha L^{1-\alpha}}$  proportion of  $C$ 's onshore profits for redistribution, which prevents arbitration by making  $C$  indifferent between arbitration and no arbitration, thus maximizing the amount of redistributive taxation without triggering foreign intervention.

**Proposition 2.** Conditional on  $K_{I,dem}$ ,  $W$ 's redistribution strategy under democracy is the fol-

lowing:

$$\psi_{dem} = \begin{cases} 0 & \text{if } \alpha K_{I,dem}^\alpha L^{1-\alpha} < c \\ 1 - \frac{c}{\alpha K_{I,dem}^\alpha L^{1-\alpha}} & \text{if } \alpha K_{I,dem}^\alpha L^{1-\alpha} \geq c. \end{cases}$$

Given the optimal redistribution strategy,  $W$ 's payoffs from democracy thus become the following:

$$u_W(\psi_{dem}|K_{I,dem}) = \begin{cases} (1 - \alpha) \left(\frac{K_{I,dem}}{L}\right)^\alpha + \frac{c}{L} & \text{if } \alpha K_{I,dem}^\alpha L^{1-\alpha} \geq c \\ (1 - \alpha) \left(\frac{K_{I,dem}}{L}\right)^\alpha + \frac{\alpha K_{I,dem}^\alpha L^{1-\alpha}}{L} & \text{if } \alpha K_{I,dem}^\alpha L^{1-\alpha} < c. \end{cases} \quad (1)$$

We can see from equation 1 that the positive effect of capital inflows on the workers' payoffs comes from two channels. The first channel is the direct effect on domestic wages. Specifically, more onshore investment will increase domestic labor's productivity, thus increasing domestic wages. The second channel is the effect on redistribution. Specifically, more capital inflows will increase the amount of onshore investment profits, which essentially increases the pool of capital income that the workers could tap into for redistribution until the no arbitration constraint binds ( $c$ ).

We now turn to the dictator's expropriation decision. Notice that the dictator's trade-off over expropriation is similar to  $W$ 's: On the one hand,  $D$  wants to expropriate the investors as much as possible for its own enrichment. On the other hand, it does not want to trigger a foreign intervention, in which case  $D$  will lose all of its expropriated income. However,  $D$ 's expropriation decision is constrained by its inability to commit not to over-expropriating  $C$  due to the lack of property rights protection. Thus,  $D$ 's expropriation decision is not only affected by  $C$ 's arbitration cost,  $c$ , but also affected by  $\bar{\psi}$ , its commitment ability, which is summarized by the following result.

**Proposition 3.** *Under dictatorship,  $D$ 's expropriation decision, conditional on  $\bar{\psi}$  and  $K_I$ , is the following:*

$$\psi = \begin{cases} 0 & \text{if } \alpha K_I^\alpha L^{1-\alpha} < c \\ 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} & \text{if } \alpha K_I^\alpha L^{1-\alpha} \geq c \text{ and } \bar{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} \\ \text{any } \psi & \text{if } \alpha K_I^\alpha L^{1-\alpha} \geq c \text{ and } \bar{\psi} < 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}. \end{cases} \quad (2)$$

Proposition 3 thus says the following. First, when the amount of onshore investment is too small or when the cost of arbitration is too large for  $C$  to resort to arbitration,  $D$ 's optimal strategy is to expropriate all of  $C$ 's onshore investment income, as there will be no consequence from expropriation. However, when the amount of onshore investment is sufficiently large or when the cost of arbitration is sufficiently small, such that  $C$  will resort to arbitration when being over-expropriated,  $D$ 's strategy will depend on its commitment ability. When  $D$  is able to commit not to over expropriating  $C$  ( $\bar{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ ),  $D$ 's optimal strategy is to avoid arbitration and make  $C$  indifferent by expropriating exactly  $1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$  proportion of  $C$ 's onshore investment income. When  $D$  is not able to commit not to over expropriating  $C$  ( $\bar{\psi} < 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ ), however,  $C$  will resort to arbitration for sure, which will deprive  $D$  of any expropriated profits. As a result,  $D$ 's expropriation decision does not make a difference and it will choose any  $\psi \in [0, \bar{\psi}]$ .

Recall that  $D$ 's commitment ability,  $\bar{\psi}$ , is uniformly distributed over  $[0, \hat{\psi}]$ . Thus, conditional on  $K_I$ , the probability that  $D$  is able to share with  $C$  the amount of profits required to avoid arbitration, i.e.,  $\bar{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ , is

$$Pr(\bar{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} | K_I) = \begin{cases} 1 - \frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}} & \text{if } \hat{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} \\ 0 & \text{if } \hat{\psi} < 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}. \end{cases}$$

Thus, given  $D$ 's optimal expropriation strategy specified in equation 2,  $D$ 's expected payoff under dictatorship prior to the realization of  $\bar{\psi}$  can be written as the following:

$$EU_D(K_I, \text{dictatorship}) = \begin{cases} \alpha K_I^\alpha L^{1-\alpha} & \text{if } \alpha K_I^\alpha L^{1-\alpha} < c \\ \left[ 1 - \frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}} \right] \cdot c & \text{if } \alpha K_I^\alpha L^{1-\alpha} \geq c \text{ and } \hat{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} \\ 0 & \text{if } \alpha K_I^\alpha L^{1-\alpha} \geq c \text{ and } \hat{\psi} < 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}. \end{cases} \quad (3)$$

Equation 3 thus reveals that the amount of onshore investment has a more nuanced

effect on  $D$ 's expected payoff under dictatorship. On the one hand,  $D$  certainly does not want to allow too little foreign capital to produce onshore (i.e.,  $K_I < \left(\frac{c}{\alpha L^{1-\alpha}}\right)^{\frac{1}{\alpha}}$ ), as there will be too little capital for  $D$  to expropriate from. On the other hand, because of  $D$ 's inability to commit to not over-expropriating foreign investors' onshore profits, more onshore investment will increase the risk of over-expropriation and thus the likelihood of foreign intervention in the form of either international arbitration or direct home government intervention. And the poorer the country's property rights protection is (lower  $\hat{\psi}$ ), the more likely that  $D$  will over-expropriate the investors, increasing the likelihood of foreign intervention.

### 3.3 $C$ 's Investment Decision

This section looks at foreign investors' onshore investment decisions. Notice first that  $C$  will never make any onshore investment that has a profit smaller than  $c$ , i.e.,  $\alpha K_I^\alpha L^{1-\alpha} \leq c$ . This is because even if  $D$  expropriates all of  $C$ 's onshore investment income in this case,  $C$  will not resort to international arbitration due to the cost involved in the process. As a result,  $D$  is able to take all of  $C$ 's onshore investment income and leave nothing for the investors without any fear of foreign intervention. Thus, the investors will be better off by not making any onshore investment at all.

Second, note that, when  $\alpha K_I^\alpha L^{1-\alpha} > c$ ,  $C$ 's onshore investment always costs  $c$  regardless of  $D$ 's expropriation decision. This is because if  $D$  over-expropriates,  $C$  will resort to arbitration to retrieve its expropriated profits, costing the investors  $c$ . Meanwhile, if  $D$  is able to commit not to over-expropriating  $C$ ,  $D$  will still expropriate an amount equal to  $c$ , as it maximizes the rents  $D$  obtains without triggering foreign intervention. As a result,  $C$  will only make an onshore investment large enough, such that the profit from onshore investment can offset the opportunity cost associated with it, i.e., the cost of expropriation/arbitration and the loss of investment returns from the offshore market. Specifically,  $C$  will only invest onshore if  $\alpha K_I^\alpha L^{1-\alpha} - c \geq r_f K_I$ , which gives us the following result.

**Lemma 1.** *There exists a threshold  $\underline{K}_I$ , such that  $C$  never makes an onshore investment smaller than  $\underline{K}_I$ .*

Notice that, if there are no restrictions on the amount of onshore investment,  $C$ 's optimal investment decision is the following,

$$\begin{aligned} K_I^* &\equiv \operatorname{argmax}_{K_I} \alpha K_I^\alpha L^{1-\alpha} - c + r_f(K - K_I) \\ &= \left(\frac{\alpha^2}{r_f}\right)^{\frac{1}{1-\alpha}} L. \end{aligned}$$

In other words,  $K_I^*$  is the maximal amount of foreign investment that could potentially flow onshore. Thus, restrictions over onshore investment will only be effective if  $\bar{K}_I \in [\underline{K}_I, K_I^*]$ , which gives us the following result.

**Proposition 4.** *Conditional on  $\bar{K}_I$ ,  $C$ 's optimal investment decision under dictatorship is the following,*

- if  $\bar{K}_I \geq K_I^*$ , then  $K_I = K_I^*$ ;
- if  $\bar{K}_I \in [\underline{K}_I, K_I^*)$ , then  $K_I = \bar{K}_I$ ;
- if  $\bar{K}_I < \underline{K}_I$ , then  $K_I = 0$ .

When  $\bar{K}_I \geq K_I^*$ , the investment restrictions do not bind for the investors. Thus, they will invest  $K_I^*$ , the amount that maximizes their overall investment profits, onshore. When  $\bar{K}_I \in [\underline{K}_I, K_I^*)$ , the investment restrictions bind, and the investors will invest exactly the allowed amount of capital onshore. When  $\bar{K}_I < \underline{K}_I$ , however, the investment restrictions are too restrictive, rendering onshore investment unprofitable. As a result, the investors will not invest any capital onshore in this case. As we will see in the next section, the restrictions on capital flows will have important implications for the regime's stability.

### 3.4 Working Class Revolt

Before examining  $D$ 's optimal strategy of investment restrictions, we need to first look at  $W$ 's revolt strategy conditional on  $\bar{K}_I$ . Notice from equation 1 that, under democracy,



$W$ 's payoff is strictly increasing in  $K_I$ . Thus, under democracy,  $W$  will not impose any binding restriction on FDI inflows.

**Proposition 5.**  $\bar{K}_{I,dem} > K_I^*$ . Thus, under democracy, the amount of onshore investment is  $K_{I,dem} = K_I^*$ .

Now, if the workers do not revolt, then their income is just the domestic wages under dictatorship, which is  $u_W(a_{W,R} = 0) = (1 - \alpha) \cdot \left(\frac{K_I}{L}\right)^\alpha$ . However, if  $W$  revolts, which succeeds with probability  $p$ , its expected payoff is

$$EU_W(a_{W,R} = 1) = p \cdot \underbrace{\left[ (1 - \alpha) \left(\frac{K_I^*}{L}\right)^\alpha + \frac{c}{L} \right]}_{\text{revolt succeeds}} + (1 - p) \cdot \underbrace{(1 - \alpha) \left(\frac{K_I}{L}\right)^\alpha}_{\text{revolt fails}} - \underbrace{\frac{c_r}{L}}_{\text{revolt cost}}.$$

Thus, the workers will revolt whenever the expected payoff from revolting is greater than not revolting, which is guaranteed by the following condition.

**Proposition 6.** The workers will revolt when the amount of onshore investment under dictator is small, i.e.,

$$K_I < K_W \equiv \left[ \left(\frac{\alpha^2}{r_f}\right)^{\frac{\alpha}{1-\alpha}} + \frac{c}{(1-\alpha)L} - \frac{c_r}{p(1-\alpha)} \right]^{\frac{1}{\alpha}} L.$$

### 3.5 FDI Restrictions under Dictatorship

This section examines  $D$ 's equilibrium strategy of FDI restrictions. To simplify the analysis, we assume that the workers' revolt cost is large enough, such that if  $D$  fully liberalizes FDI inflows, they will not revolt, while if  $D$  only allows the minimum possible amount of FDI to flow in, i.e.,  $K_I = \underline{K}_I$ , workers will revolt.

**Assumption 2.**  $\underline{K}_I < K_W < K_I^*$ .

Recall that  $K_W = \left[ \left(\frac{\alpha^2}{r_f}\right)^{\frac{\alpha}{1-\alpha}} + \frac{c}{(1-\alpha)L} - \frac{c_r}{p(1-\alpha)} \right]^{\frac{1}{\alpha}} L$ , while  $K_I^* = \left(\frac{\alpha^2}{r_f}\right)^{\frac{1}{1-\alpha}} L$ . Thus, assumption 2 is guaranteed if the revolt cost is neither too large nor too small, i.e.,

$$c_r \in \left( \frac{p \cdot c}{L}, \left[ p \cdot (1 - \alpha) \right] \cdot \left[ \left(\frac{\alpha^2}{r_f}\right)^{\frac{1}{1-\alpha}} + \frac{c}{(1-\alpha)L} \right] \cdot \left(\frac{L}{\underline{K}_I}\right)^\alpha \right).$$

In addition, we focus on the most sensible case in which the property rights protection under dictatorship is not too low, such that the dictator will not over-expropriate  $C$  with probability 1 when it allows  $K_W$  amount of foreign capital to produce onshore, while leaving the full equilibrium specification to the Online Appendix.

**Assumption 3.**  $\hat{\psi} > 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}$ .

The next proposition summarizes  $D$ 's optimal choice of FDI restrictions conditional on property rights protection ( $\hat{\psi}$ ) and workers' strength ( $p$ ).

**Proposition 7.** *Under assumptions 1 to 3,  $D$ 's equilibrium choice of FDI restrictions is the following,*

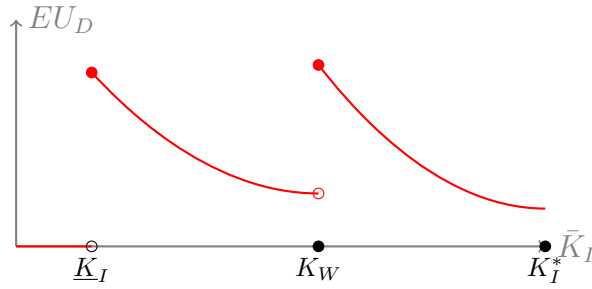
- *If either the property rights protection is high ( $\hat{\psi} > \frac{1}{p} \left[ \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} - (1-p) \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right) \right) \right]$ ) or the working class is strong ( $p \geq 1 - \frac{\hat{\psi} - \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right)}{\hat{\psi} - \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} \right)}$ ),  $D$  allows  $\bar{K}_I = K_W$  amount of capital to flow onshore. In this case, workers will not revolt, while the probability that  $D$  over-expropriates  $C$  is  $\frac{1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}}{\hat{\psi}}$ .*
- *If either the property rights protection is low ( $\hat{\psi} < \frac{1}{p} \left[ \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} - (1-p) \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right) \right) \right]$ ) or the working class is weak ( $p < 1 - \frac{\hat{\psi} - \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right)}{\hat{\psi} - \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} \right)}$ ),  $D$  allows  $\bar{K}_I = \underline{K}_I$  amount of capital to flow onshore. In this case, the workers will revolt, while the probability that  $D$  over-expropriates  $C$ 's onshore profits is  $\frac{1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}}}{\hat{\psi}}$ .*

$D$ 's optimal level of FDI restrictions thus depends on whether its concern over foreign intervention dominates or its concern over domestic unrest dominates. When either the workers are weak ( $p < 1 - \frac{\hat{\psi} - \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right)}{\hat{\psi} - \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} \right)}$ ) or the property rights are poorly protected ( $\hat{\psi} < \frac{1}{p} \left[ \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} - (1-p) \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right) \right) \right]$ ),  $D$ 's concern over over-expropriation dominates. As a result,  $D$  will try to prevent foreign intervention by restricting FDI inflows ( $\bar{K}_I = \underline{K}_I$ ) at the risk of domestic unrest. Meanwhile, when the workers are strong ( $p \geq 1 - \frac{\hat{\psi} - \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right)}{\hat{\psi} - \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} \right)}$ ) or the property rights are relatively well protected ( $\hat{\psi} >$

$\frac{1}{p} \left[ \left( 1 - \frac{c}{\alpha \bar{K}_I^\alpha L^{1-\alpha}} - (1-p) \left( 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}} \right) \right) \right]$ ,  $D$ 's concern over working class unrest dominates. As a result,  $D$  will appease the workers by liberalizing FDI inflows ( $\bar{K}_I = K_W$ ).

The figures below illustrate  $D$ 's payoff from various FDI restriction strategies under different scenarios. Figure 2 shows the case of  $\underline{K}_I < K_W < K_I^* < K_{\hat{\psi}}$ , where  $K_{\hat{\psi}} \equiv \left( \frac{c}{\alpha L^{1-\alpha} (1-\hat{\psi})} \right)^{\frac{1}{\alpha}}$  is defined as the threshold beyond which further increase in onshore investment will lead to over-expropriation by the dictator with probability 1 conditional on  $\hat{\psi}$ . When  $\bar{K}_I < \underline{K}_I$ , no foreign capital will flow onshore under dictatorship, as the returns from onshore investment are not large enough to overcome the cost involved in arbitration, deterring  $C$  from making any onshore investment.

**Figure 2:**  $\underline{K}_I < K_W < K_I^* < K_{\hat{\psi}}$



When  $\bar{K}_I \in [\underline{K}_I, K_W)$ ,  $C$ 's onshore investment is large enough to make arbitration worthwhile. However, given  $\bar{K}_I < K_I^*$ , the FDI restrictions imposed by  $D$  bind. Thus,  $C$  will invest exactly  $\bar{K}_I$  amount of capital onshore. However, given  $\bar{K}_I < K_W$ , this amount of onshore investment cannot raise domestic wages enough to prevent a working-class revolt. Thus, the workers will revolt in this case. In addition, further relaxation in FDI restrictions up to the point of  $K_W$  will increase the likelihood of over-expropriation by the dictator. As a result, as  $\bar{K}_I$  increases from  $\underline{K}_I$  to  $K_W$ ,  $D$ 's expected payoff will decrease.

As  $\bar{K}_I$  reaches  $K_W$ , however, the amount of onshore investment can raise domestic wages sufficiently high to appease the workers. As a result, the workers will not revolt when  $\bar{K}_I$  is greater than  $K_W$ . As a result, there is a jump in  $D$ 's expected utility as  $\bar{K}_I$  reaches  $K_W$ . However, a further increase in  $\bar{K}$  up to  $K_I^*$  will again reduce  $D$ 's expected

payoff, as the risk of over-expropriation increases. Thus,  $D$ 's optimal choice of FDI restrictions in this case is between,  $\underline{K}_I$ , a stricter restriction that will lead to a working-class revolt but reduce the risk of over-expropriation, versus  $K_W$ , a less strict restriction that could prevent a working-class revolt but increase the risk of over-expropriation and international intervention.

When the working class is relatively weak or when property rights protection is relatively poor, the risk of over-expropriation dominates. As a result,  $D$  will choose  $\underline{K}_I$  to reduce the risk of over-expropriation while embracing a working-class revolt. However, if the working class is relatively strong or the property rights protection is relatively high, the concern over a successful working-class revolt dominates. Thus,  $D$  will relax FDI restrictions to appease the workers by allowing  $K_W$  amount of foreign capital to invest onshore, while embracing the risk of over-expropriation and the resulting international arbitration.

**Figure 3:**  $\underline{K}_I < K_W < K_{\hat{\psi}} < K_I^*$

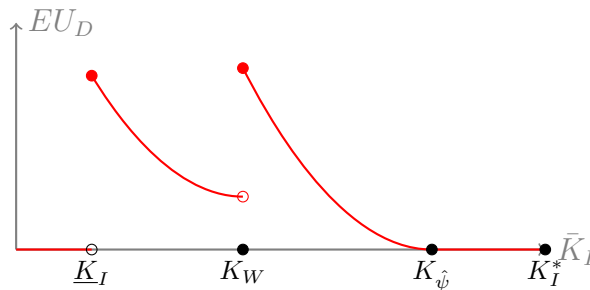


Figure 3 shows a similar case to figure 2, except we now have  $K_{\hat{\psi}} < K_I^*$ . That is, it is possible for  $D$  to over-expropriate with probability 1 when it relaxes FDI restrictions too much.  $D$ 's tradeoff in this case is again between  $K_W$ , which prevents a working-class revolt but induces a higher likelihood of over-expropriation, versus  $\underline{K}_I$ , which reduces the likelihood of over-expropriation while risking a working-class revolt. What  $D$  will choose again depends on the strength of the workers and the country's property rights regime.

Proposition 7 thus reveals two factors that could influence dictators' choice of FDI restrictions, namely, the level of property rights protection and the strength of the working class. Specifically, either a higher level of property rights protection or a stronger working class will induce the dictator to relax FDI restrictions and allow more foreign investment to flow onshore.

**Hypothesis 1.** *Under dictatorship, a higher level of property rights protection is associated with a lower level of FDI restrictions.*

**Hypothesis 2.** *Under dictatorship, a stronger working class is associated with a lower level of FDI restrictions.*

## 4 Empirical Evidence

In this section, we use regression analysis of panel data to test the hypotheses we specified in the previous section. We first describe our empirical strategy, including variable operationalization, data sources, and regression models. We then show statistical results that are consistent with our theoretical predictions. We find evidence that a state's demand for FDI is associated with its working class status and property rights. More specifically, inward FDI restrictions tend to be fewer in states with a more powerful working class or stronger property rights.

### 4.1 Empirical Strategy

Our main outcome variable of interest is the extent to which states impose restrictions on inward foreign direct investment. Admittedly, gauging leaders' desire for FDI is a challenging task as we cannot directly access dictators' mindsets. Therefore, we can only focus on observable indicators of demand for foreign investment. We do not use the volume of inward FDI as the dependent variable because the sheer amount of foreign investment is shaped by not only the demand side but also the supply side.

While policies do not always convey true intentions, we argue that the level of regulatory restrictions imposed on inward FDI is an appropriate measure of demand for FDI. This perspective is grounded in the understanding that the extent to which a government enforces regulatory barriers reflects its inclination to encourage foreign capital inflow. In essence, a higher level of regulatory restrictions implies a more controlled approach toward FDI, whereas fewer restrictions signal a greater receptiveness to foreign direct investment.

We retrieved the FDI restrictiveness index from the OECD. The index gauges the restrictiveness of a country's foreign direct investment rules by scrutinizing four main types of restrictions: foreign equity restrictions, discriminatory screening or approval mechanisms, restrictions on key foreign personnel, and operational restrictions. The data cover 38 OECD and 45 non-OECD countries in 1997, 2003, 2006, and 2010–2020. The index ranges from 0 to 1, where a higher score indicates a greater degree of FDI restrictiveness.

Our theory predicts that a state with a stronger working class or better property rights protection mechanisms tends to lift its restrictions on inward FDI. For property rights, we rely on V-Dem's data on the right to private property, assessing the degree to which individuals are allowed to acquire, possess, inherit, and sell private property, as well as any constraints on these rights. This metric spans from 0 to 1, with higher scores denoting stronger property rights.

Nonetheless, unlike property rights, there is no direct indicator of the strength of the working class that covers our temporal domain. We use urbanization and non-agricultural employment as proxies for the power of the working class. The rationale is that the working class tends to have greater organization and political influence than rural areas. Moreover, there is likely to be a more powerful working class in economies where a significant portion of the workforce is employed in non-agricultural sectors. The data on both of the two variables are taken from the World Bank.

Moreover, we consider a battery of control variables in the statistical models. These

control variables include the country's regime type, overall trade dependence, population size, per capita GDP, inflation rate, economic growth rate, and whether the country is under an IMF project in a given year. To investigate how the effects of the main explanatory may vary across regime type, we interact the independent variables with the democratic status of the country.

We use ordinary least squares (OLS) regressions with two-way fixed effects to analyze the statistical results, accounting for both time-invariant factors at the country level and year-specific factors that shape all countries in a given year. All independent and control variables are lagged by one year to account for potential endogeneity. Standard errors are clustered by country.

## 4.2 Statistical Results

Table 1 reports the main empirical results regarding the determinants of inward foreign direct investment restrictions, including all the control variables and two-way fixed effects. In Model (1), we utilize urbanization as a proxy for the power of the working class, while Model (2) focuses on non-agricultural employment.

The statistical results in Table 1 show that in non-democracies (i.e., when  $Democracy = 0$ ), countries with lower levels of property rights protection are more likely to reduce inward FDI restrictions. The effect of property rights on FDI restrictiveness for non-democracies is statistically significant in both models. Moreover, the relationship between property rights and FDI restrictions turns positive for democracies (i.e., when  $Democracy = 1$ ), but the effect is not statistically significant.

When it comes to the strength of the working class, the effect on foreign investment restrictions is negative for both democracies and non-democracies. Thus, in countries where the working class is more powerful, FDI inflow restrictions are generally fewer. Further, the effect of working class power is even more pronounced for non-democracies (i.e., when  $Democracy = 0$ ) than for democracies (i.e., when  $Democracy = 1$ ). More

**Table 1: Property rights, working class, and FDI restrictions**

	<i>Dependent variable:</i>	
	FDI Restrictions	
	(1)	(2)
Property Rights <sub>t-1</sub>	-0.233* (0.125)	-0.173** (0.085)
Property Rights <sub>t-1</sub> × Democracy <sub>t-1</sub>	0.331*** (0.068)	0.302*** (0.069)
Urban Population <sub>t-1</sub>	-0.553*** (0.171)	
Urban Population <sub>t-1</sub> × Democracy <sub>t-1</sub>	0.247*** (0.065)	
Non-agricultural Employment <sub>t-1</sub>		-0.702*** (0.209)
Non-agricultural Employment <sub>t-1</sub> × Democracy <sub>t-1</sub>		0.342*** (0.102)
Democracy <sub>t-1</sub>	-0.420*** (0.044)	-0.513*** (0.059)
Trade/GDP <sub>t-1</sub>	0.0001 (0.0003)	0.0001 (0.0003)
Population <sub>t-1</sub> , logged	-0.134** (0.058)	-0.125** (0.055)
GDP Per Capita <sub>t-1</sub> , logged	-0.134*** (0.037)	-0.076** (0.033)
Inflation <sub>t-1</sub>	0.001** (0.0004)	0.001** (0.0004)
Growth <sub>t-1</sub>	0.001 (0.0004)	0.0001 (0.0004)
Under IMF <sub>t-1</sub>	0.088 (0.058)	0.028 (0.037)
Country Fixed Effects	✓	✓
Year Fixed Effects	✓	✓
Observations	747	747
Adjusted R <sup>2</sup>	0.945	0.947

Note:

\*p<0.1, \*\*p<0.05; \*\*\*p<0.01



specifically, higher proportions of urban population and non-agricultural employment are both associated with fewer FDI restrictions.

All told, the empirical evidence lends support to our hypotheses: states with better property rights protection mechanisms or a more powerful working class tend to reduce inward FDI restrictiveness. The effects are statistically significant even when using a conservative method conditioning on a series of control variables as well as country and year fixed effects.

## 5 Concluding Remarks

Why do some countries have higher levels of foreign direct investment inflows than others? A large and growing body of literature has examined the relationship between regime type and foreign direct investment. Notwithstanding its contributions, most of this research has focused on the “supply side”: the features and practices of potential host governments that make them attractive sites for foreign investment. These past studies generally assume that all states desire high levels of inward FDI, and that FDI flows are driven almost exclusively by the supply of willing investors.

In this article, we focus on a largely overlooked determinant of FDI inflows: potential host countries’ “demand” for foreign direct investment. Utilizing a model of economic production, this article demonstrates that FDI inflows bring both benefits and risks to dictators. On the one hand, more FDI inflows will increase domestic wages, enhancing regime stability by reducing the workers’ incentives to revolt. On the other hand, dictators’ inability to commit to property rights protection may increase the likelihood of expropriation, leading to international arbitration and even foreign government intervention. Thus, host countries face countervailing incentives. As the availability of foreign investment increases, dictators need to walk a fine line between avoiding the over-expropriation of foreign investors (foreign threats) and appeasing domestic labor (domestic threats)

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# Appendix

## A.1 Proofs for Sections 3.1 to 3.4

*Proof of Proposition 2.* Conditional on  $C$ 's arbitration strategy outlined in Proposition 1,  $W$ 's payoffs from different redistribution strategies are the following,

$$u_W(\psi_{dem}) = \begin{cases} w_{dem} + \frac{(1-\psi_{dem}) \cdot \alpha K_{I,dem}^\alpha L^{1-\alpha}}{L} & \text{if } \psi_{dem} \cdot \alpha K_{I,dem}^\alpha L^{1-\alpha} \leq c \\ w_{dem} & \text{if } \psi_{dem} \cdot \alpha K_{I,dem}^\alpha L^{1-\alpha} > c. \end{cases}$$

Note that, if  $\alpha K_{I,dem}^\alpha L^{1-\alpha} \leq c$ , then  $C$  will not resort to arbitration even if  $W$  takes all of  $C$ 's onshore investment profits. As a result,  $W$  will choose  $\psi_{dem} = 0$  to maximize redistribution. If  $\alpha K_{I,dem}^\alpha L^{1-\alpha} > c$ , then given  $u_W(\psi_{dem})$  is linear in  $\psi_{dem}$ ,  $W$ 's optimal strategy is the minimal  $\psi_{dem}$  that satisfies the no-arbitration constraint, i.e.,  $\psi_{dem} = \frac{c}{\alpha K_{I,dem}^\alpha L^{1-\alpha}}$ , as required.  $\square$

*Proof of Proposition 3.* Conditional on  $C$ 's arbitration strategy outlined in Proposition 1,  $D$ 's payoffs from different redistribution strategies are the following,

$$u_D(\psi|\bar{\psi}) = \begin{cases} (1-\psi) \cdot \alpha K_I^\alpha L^{1-\alpha} & \text{if } \alpha K_I^\alpha L^{1-\alpha} < c \\ (1-\psi) \cdot \alpha K_I^\alpha L^{1-\alpha} & \text{if } \alpha K_I^\alpha L^{1-\alpha} \geq c \text{ and } \bar{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} \\ 0 & \text{if } \alpha K_I^\alpha L^{1-\alpha} \geq c \text{ and } \bar{\psi} < 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}. \end{cases}$$

Note that, if  $\alpha K_I^\alpha L^{1-\alpha} < c$ ,  $C$  will not resort to arbitration even if  $D$  takes all of  $C$ 's onshore investment income. Thus,  $D$  will choose  $\psi = 0$  to maximize expropriation. If  $\alpha K_I^\alpha L^{1-\alpha} \geq c$  and  $\bar{\psi} \geq 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ , given  $(1-\psi) \cdot \alpha K_I^\alpha L^{1-\alpha}$  is linear in  $\psi$ ,  $D$ 's optimal strategy is the minimal  $\psi$  that satisfies the no-arbitration constraint, i.e.,  $\psi = 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ . If  $\alpha K_I^\alpha L^{1-\alpha} \geq c$  and  $\bar{\psi} < 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ ,  $D$ 's expropriation will not affect its payoff, as  $C$  will always resort to arbitration. As a result,  $D$  will choose any  $\psi$ , as required.  $\square$

*Proof.* Taking derivative of  $\alpha K_I^\alpha L^{1-\alpha} - c - r_f K_I$  with respect to  $K_I$ , we obtain  $\alpha^2 \left(\frac{L}{K_I}\right)^{1-\alpha} - r_f$ , which is decreasing in  $K_I$ . Note that when  $K_I = \left(\frac{\alpha^2}{r_f}\right)^{\frac{1}{1-\alpha}} L$ , the function  $\alpha K_I^\alpha L^{1-\alpha} - c - r_f K_I$  achieves its maximum value, which, under assumption 1,

is positive. Meanwhile, when  $K_I = 0$ , the function is equal to  $-c$ , which is negative. Thus, there exists an  $\underline{K}_I < \left(\frac{\alpha^2}{r_f}\right)^{\frac{1}{1-\alpha}} L$  such that when  $K_I < \underline{K}_I$ , the function is negative, while when  $K_I > \underline{K}_I$ , the function is positive. In other words,  $C$  will not invest less than  $K_I$  onshore, as required.  $\square$

*Proof of Proposition 6.*  $W$  will revolt when its expected payoff from revolting is greater than not revolting, i.e.,

$$p \cdot \left[ (1-\alpha) \left(\frac{K_I^*}{L}\right)^\alpha + \frac{c}{L} \right] + (1-p) \cdot (1-\alpha) \left(\frac{K_I}{L}\right)^\alpha - c_r > (1-\alpha) \cdot \left(\frac{K_I}{L}\right)^\alpha,$$

from which we obtain  $K_I < \left[ \left(\frac{K_I^*}{L}\right)^\alpha + \frac{c}{(1-\alpha)L} - \frac{c_r}{p(1-\alpha)} \right]^{\frac{1}{\alpha}} L$ . Substituting  $K_I^* = \left(\frac{\alpha^2}{r_f}\right)^{\frac{1}{1-\alpha}} L$ , we obtain  $K_I < K_W \equiv \left[ \left(\frac{\alpha^2}{r_f}\right)^{\frac{1}{1-\alpha}} + \frac{c}{(1-\alpha)L} - \frac{c_r}{p(1-\alpha)} \right]^{\frac{1}{\alpha}} L$ , as required.  $\square$

## A.2 FDI restrictions for the full range of $\hat{\psi}$

In this section, we specify the equilibrium level of FDI restrictions for the full range of property rights  $\hat{\psi}$ , which is stated by the following proposition.

**Proposition A.1.** *Under assumptions 1 to 2,  $D$ 's equilibrium choice of FDI restrictions is the following,*

- if  $\hat{\psi} > 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}$ , then

- If either the property rights protection is high ( $\hat{\psi} > \frac{1}{p} \left[ \left(1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} - (1-p) \left(1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}\right)\right) \right]$ ) or the working class is strong ( $p \geq 1 - \frac{\hat{\psi} - \left(1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}\right)}{\hat{\psi} - \left(1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}\right)}$ ),  $D$  allows  $\bar{K}_I = K_W$  amount of capital to flow onshore. In this case, workers will not revolt, while the probability that  $D$  over-expropriates  $C$  is  $\frac{1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}}{\hat{\psi}}$ .

- If either the property rights protection is low ( $\hat{\psi} < \frac{1}{p} \left[ \left(1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}} - (1-p) \left(1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}\right)\right) \right]$ ) or the working class is weak ( $p < 1 - \frac{\hat{\psi} - \left(1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}\right)}{\hat{\psi} - \left(1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}\right)}$ ),  $D$  allows  $\bar{K}_I = \underline{K}_I$  amount of capital to flow onshore. In this case, the workers will revolt, while the probability that  $D$  over-expropriates  $C$ 's onshore profits is  $\frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}}$ .

- if  $\hat{\psi} \in (1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}, 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}})$ , then  $D$  allows  $\bar{K}_I = \underline{K}_I$  amount of capital to flow onshore. In this case, the workers will revolt, while the probability that  $D$  over-expropriates  $C$  is  $\frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}}$ .
- if  $\hat{\psi} < 1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}$ , then  $D$  chooses any  $\psi \in [0, \bar{\psi}]$ . In this case, the workers will revolt, while the probability that  $D$  over-expropriates  $C$ 's onshore profits is 1.

*Proof.* We start by looking at the case of  $\hat{\psi} > 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}$ , which is equivalently to  $K_{\hat{\psi}} > K_W$ , where  $K_{\hat{\psi}} \equiv \left( \frac{c}{\alpha L^{1-\alpha} (1-\hat{\psi})} \right)^{\frac{1}{\alpha}}$  is defined as the threshold beyond which further increase in onshore investment will lead to over-expropriation by the dictator with probability 1. In this case, we have  $EU_D(\bar{K}_I < \underline{K}_I) = 0$ , as  $C$  will not invest any capital onshore in this case. When  $\bar{K}_I \in (\underline{K}_I, K_W)$ , the workers will revolt. Thus, we have

$$EU_D(\bar{K}_I \in (\underline{K}_I, K_W)) = (1-p) \left[ 1 - \frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}} \right] c,$$

which, as we can see, is decreasing in  $\bar{K}_I$ . When  $\bar{K}_I > K_W$ , the workers will not revolt. However, it is possible for  $D$  to over-expropriate  $C$  for sure if  $K_{\hat{\psi}}$  is smaller than  $K_I^*$ . Specifically,

$$EU_D(\bar{K}_I \geq K_W) = \begin{cases} \left[ 1 - \frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}} \right] c & \text{if } \bar{K}_I < K_I^* < K_{\hat{\psi}} \\ \left[ 1 - \frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}} \right] c & \text{if } \bar{K}_I < K_{\hat{\psi}} < K_I^* \\ 0 & \text{if } K_{\hat{\psi}} < \bar{K}_I < K_I^*, \end{cases}$$

which is again decreasing in  $\bar{K}_I$ . Thus,  $D$ 's calculation will depend on the comparison between  $EU_D(\bar{K}_I = \underline{K}_I) = (1-p) \left[ 1 - \frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}} \right] c$  and  $EU_D(\bar{K}_I = K_W) = \left[ 1 - \frac{1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}}}{\hat{\psi}} \right] c$ . Specifically,  $EU_D(\bar{K}_I = \underline{K}_I) > EU_D(\bar{K}_I = K_W)$  if  $p \geq 1 - \frac{\hat{\psi} - (1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}})}{\hat{\psi} - (1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}})}$ ,

while  $EU_D(\bar{K}_I = \underline{K}_I) < EU_D(\bar{K}_I = K_W)$  if  $p \geq 1 - \frac{\hat{\psi} - (1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}})}{\hat{\psi} - (1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}})}$ , as required.

Now, if  $\hat{\psi} \in (1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}, 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}})$ , which is equivalently to  $K_{\hat{\psi}} < K_W$ , then we have  $EU_D(\bar{K}_I > K_{\hat{\psi}}) = 0$ , as  $D$  will over-expropriate for sure, leading to international arbitration. Similarly, we have  $EU_D(\bar{K}_I < \underline{K}_I) = 0$ . Meanwhile,

$$EU_D(\bar{K}_I \in (\underline{K}_I, K_{\hat{\psi}})) = (1-p) \left[ 1 - \frac{1 - \frac{c}{\alpha K_I^\alpha L^{1-\alpha}}}{\hat{\psi}} \right] c,$$



which is again decreasing in  $\bar{K}_I$ . Thus,  $D$ 's optimal choice of FDI restrictions is  $\bar{K}_I = \underline{K}_I$ , as required.

Now, if  $\hat{\psi} < 1 - \frac{c}{\alpha \underline{K}_I^\alpha L^{1-\alpha}}$ , which is equivalent to  $K_{\hat{\psi}} < K_W$ , then we have  $EU_D(\bar{K}_I > \underline{K}_I > K_{\hat{\psi}}) = 0$ . In other words,  $D$ 's payoff is 0 regardless its chosen level of FDI restrictions. As a result, it will choose any  $\psi \in [0, \bar{\psi}]$ , as required.  $\square$

Figure A.1 illustrates the case of  $\hat{\psi} \in (1 - \frac{c}{\alpha \underline{K}_I^\alpha L^{1-\alpha}}, 1 - \frac{c}{\alpha K_W^\alpha L^{1-\alpha}})$ . In this case, because either the workers are too strong or the property rights protection is too low, the dictator will risk over-expropriating the foreign investors with probability 1 if it intends to satisfy the workers by choosing  $\bar{K}_I = K_W$ . As a result, the dictator has no choice but to impose severe restrictions on FDI inflows ( $\bar{K}_I = \underline{K}_I$ ) to avoid over-expropriation and the resulting arbitration, while risking a successful working class revolt.

**Figure A.1:**  $\underline{K}_I < K_{\hat{\psi}} < K_W < K_I^*$

