The Political Economy of Middle Income*

Avidit Acharya† Stanford
Stephen Haber‡ Stanford
Alexander Lee§ Univ of Rochester

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Abstract

Governments in many middle income countries promote the interests of a small set of firms while erecting barriers to entry and threatening the property rights of other economic actors. We show how such economic favoritism yields second-best outcomes that are nevertheless welfare-superior to scenarios with no property rights, but fall short of the first-best outcome of free entry and open competition. We develop a model to explain how such policies are politically feasible and can be optimal from the perspective of rulers when first-best policies are not. We illustrate the political economy of middle income countries with the examples of Suharto's Indonesia, Mexico under Porfirio Díaz, and Thailand in the second half of the 20th century.

Keywords: middle income, property rights, crony capitalism, economic favoritism, institutions

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†Professor of Political Science and, by courtesy, of Political Economics in the Graduate School of Business, and Senior Fellow, by courtesy, at the Hoover Institution, Stanford University; avidit@stanford.edu.

‡Professor of Political Science, of History, and (by courtesy) of Economics, and Senior Fellow at the Hoover Institution, Stanford University; haber@stanford.edu.

§Associate Professor of Political Science, University of Rochester; alexander.mark.lee@rochester.edu.

1 Introduction

Countries in the world can be divided into three income categories: high, low, and middle (Gill et al., 2007, Gill and Kharas, 2015). High-income countries are characterized by economic institutions that provide robust protections of property rights, where firms face low barriers to market entry alongside high levels of competition. At the opposite extreme, low-income countries, such as many in sub-Saharan Africa, feature weak economic institutions with low production and few active industries.

The third category of countries—middle-income nations such as Turkey, Mexico, and Malaysia—have institutions that are not as robust as in high-income settings, but levels of economic activity are still much greater than in low income societies. The political economy of these places is characterized by a system of economic favoritism by which the state protects and promotes the economic interests of some firms while restricting market access for others, engendering a system of rent-protection and crony capitalism that acts as an obstacle to further development (Rajan and Zingales, 2004).[1]

With much of the work in institutional economics theorizing about development in binary terms, less is known about the conditions that lead some countries to achieve middle income status while others languish at low income, and yet others are able to implement the competitive policies that generate high income. The models surveyed by Besley and Ghatak (2010) and Acemoglu (2006b) typically feature two equilibria—one in which the state protects the property rights of investors, and another in which it does not, leading to underinvestment. Even the models of Acemoglu and Robinson (2000) and Acemoglu (2006a) in which the state engages in economic favoritism by protecting the monopoly rents of incumbent firms do not explain the political economy of middle income countries as distinct from those of both low and high income.

In this paper, we argue that the political economy of middle income countries is qualitatively distinct from that of both low income and high income societies, and thus we cannot fully understand the variation in institutional arrangements seen around the world without a model that features three distinct equilibria corresponding to each of the three categories of countries. We develop such a model to shed light on the conditions under which achieving middle income status is politically feasible when high income status and its associated institutions are not.

[1] See, more specifically, "Finance and Opportunity in India," 20th Lalit Doshi Memorial Lecture, 2014, by Raghuram Rajan. See also Kang (2002) and Aslund (2019).

Our model features a ruler and two firms which differ in their productivity and their relationship with the ruler. At the start of the game, the ruler decides which firms to grant operating licenses to, and in each period decides whether or not to renew any existing licenses. If both firms are operational, at most one (the high productivity firm) earns a positive profit. If only one firm is operational, its monopoly profit is higher than under competition with the other firm. The ruler and any firm that earns a positive profit (which again is at most one firm) then simultaneously make the following decisions: the ruler decides how much to tax profits and the firm decides whether or not to support the ruler. The ruler's chances of being overthrown by the opposition increase if he does not have the support of the firm.[2]

In this setting, the ruler must be careful who he allows to operate. If the tax rate is too high, then a firm may side with opposition forces in the hope of ousting the ruler and transitioning to a new regime that provides more favorable policies. Likewise, the ruler himself faces a commitment problem: if the tax rate is too low, then he may be tempted to expropriate the firm, and in this case the firm would certainly want to help oust him.[3] Consequently, if there is a tax rate (neither too high nor too low) such that the ruler and firm's commitment problems are both non-binding, then an outcome of mutual trust between rulers and firms can supported in equilibrium.

We show that this two-sided trust problem cannot be resolved in any equilibrium if the discount factor is too low—the only possible outcome is a low income equilibrium whereby the ruler does not grant market entry to either firm. On the other hand, if the wedge between the high productivity firm's profits under monopoly versus competition is not too large, then there exists an equilibrium that resolves the two-sided trust problem, provided the discount factor is sufficiently high. In this case, the high productivity firm is unwilling to accept the risk of transitioning to a new regime that is even less favorable it, even if there also exists some possibility that a new regime would be more favorable (e.g. the new ruler allows the high firm to be a monopoly). Of course, to maintain this equilibrium, the probability of transitioning to the more favorable regime cannot be too large. Hence, the high productivity firm supports the incumbent even if its profits are lower than they could be without competition from the other firm.

Although this competitive outcome equilibrium results in the highest aggregate income and welfare, it is not the one that is ruler-optimal. In fact,

[2]In related work Razo (2008) constructs a model with politicians and a network of firms, in which the firms cooperate to provide mutual protections when protection by the state is unavailable. In our model, however, it is still the state that sets policy.

[3]See Acemoglu (2003) for a discussion of this two-sided commitment problem.

whenever this equilibrium exists, so does one in which the ruler grants the high productivity firm monopoly power and earns a higher payoff. Moreover, if the discount factor is in an intermediate range—not so low that only the low income outcome is an equilibrium outcome and not so high that the high income outcome can also be supported in equilibrium—then it is possible that a middle income outcome is supported in which one of the two firms acts as a monopoly in every period.

Middle income equilibria are welfare improving relative to a low income equilibrium where the ruler grants no licenses, even if they are socially suboptimal relative to high income equilibria. They feature the kind of favoritism and rent-protection that has been the subject of the literature on the "middle income trap," premised on the observation that very few countries in the past century and a half have successfully transitioned from low to high income.[4] Our theory provides a new political economy explanation for this trap: middle income outcomes may be politically feasible when high income outcomes are not, and even when high income outcomes are feasible, rulers may prefer the middle income outcomes.[5,6]

Nevertheless, an important policy implication of our model is that if there is no politically feasible path from low to high income, then it is suboptimal to forgo the welfare gains that could be generated by transitioning to middle income even when this transition involves the emergence of cronyism. To highlight this point, consider for example the cases of Indonesia and Madagascar in the 1970's and 1980's. In 1970, both were low-income countries, with economies reliant on sectors such as agriculture, tourism, mining, and textiles. The World Bank estimates that in 1970 Madagascar had a level of GDP per capita more than twice as high as Indonesia— $167 per capita compared to Indonesia's $79. During the next two decades, Indonesia's Suharto regime engaged in substantial favoritism, granting monopoly power to a number of closely connected firms, and setting up a system of

[4]Using Doner and Schneider's (2016) criteria, only two countries that were low income in 1951 (out of 86) had attained high income status by 2010: South Korea and Taiwan. The 47 low income countries that were able to cross Doner and Schneider's middle income threshold were, as of 2010, still middle income.

[5]Works such as Aiyar et al. (2013), Gill et al. (2007), Eichengreen et al. (2013), and Doner and Schneider (2016) on the middle income trap typically attribute it to economic factors (such as under-investment in human capital and R&D) rather than politics.

[6]The explanation of various traps (such as classical poverty traps) as an equilibrium phenomenon is a standard approach in the literature on development and growth, and an explanation for the failure of convergence predicted by many standard growth models. See, e.g., Barro and Sala-i Martin (1992, 2004). See Patel et al. (2021) for a counter-point specific to the middle income trap literature.

cronyism that became entrenched. Meanwhile, in Madagascar, the government of Admiral Didier Ratsiraka protected the property rights of no one. He nationalized all firms with French ties, as well as all import-export companies, banks, and insurance companies, while adopting a policy of state-led industrialization modelled on the regime's closest ally – North Korea. By 1997, near the end of the Suharto regime, Indonesia's GDP per capita had increased over ten-fold, to $1054 while Madagascar's GDP per capita, at $288 per capita, had not even doubled. Today, the average Indonesian is more than nine times richer than the average Madagascan, and Indonesia fares better than Madagascar on a number of other development indicators as well, including adult literacy and life expectancy.[7]

The rest of this paper is organized as follows. In Sections 2, 3 and 4 we develop and analyze the model. We illustrate the model in Sections 5 by discussing the growth experiences of three middle income countries: Indonesia, Mexico and Thailand. Section 6 concludes with policy implications.

2 Economy

There is a continuum of workers of unit mass, a low productivity firm L, and a high productivity firm H. The firms can either be operational or non-operational. A firm that is non-operational earns a profit of 0.

Workers may work outside of the formal economy or for a firm that is operational in the formal economy. Each worker has a type θ that represents his income from working in the informal sector. We assume that the distribution of types is a Pareto distribution $F(\theta) = \theta^{\phi}$ on support normalized to $[0, 1]$ where $0 < \phi \leq 1$.[8]

Each operational firm $j \in \{L, H\}$ posts a wage rate w_j, and all workers work for the firm offering the higher wage, provided it is higher than their outside option θ. Those with a better outside option work in the informal sector. If the firms post the same wage, then workers can work for either firm. If firm j is operational, it can produce $A_j L_j$ units of output by employing L_j units of labor, where $0 < A_L < A_H < 1$ are the productivity levels of the firms. Thus, firm j's profit is

$$\Pi_j = A_j L_j - w_j L_j$$

[7] Indonesia's human development index (HDI) in the year 2021 (reported in the 2022 UNDP Human Development Report) was 0.705, while Madagascar's was 0.501. Their inequality-adjusted HDIs were 0.585 and 0.367 respectively.

[8] Actually, when $\phi = 1$ this is the uniform distribution on $[0, 1]$, which we allow.

If only one firm j is operational, then it is a monopoly employer (monopsony in the labor market) and optimally chooses wage

$$w_j^m = \frac{\phi}{1+\phi} A_j \tag{1}$$

so that labor employed is $L_j^m = (w_j^m)^\phi$ and its profit is

$$\Pi_j^m := \frac{\phi^\phi}{(1+\phi)^{1+\phi}} A_j^{1+\phi} \tag{2}$$

Note that we have assumed that even a monopoly employer cannot wage-discriminate, and that labor supply meets labor demand.[9]

If both firms operate, then they are Bertrand competitors in the labor market. By standard arguments detailed in Appendix A, the labor market clearing wage rate in this case is either the rate that would give the low productivity firm a zero profit if it employed any positive mass of workers, i.e. $w = A_L$, or the high productivity firm's monopoly wage rate, i.e. $w = w_H^m$, the higher of the two.

To ensure there exists a wedge between the competition equilibrium and the high productivity firm monopoly equilibrium, we assume throughout that

$$\frac{\phi}{1+\phi} < \frac{A_L}{A_H} \tag{A1}$$

When this is the case wages are higher under the competition equilibrium and thus more workers are employed in the formal economy.

In the proposition below, we summarize the main claims above.

Proposition 1. *In a labor-market clearing equilibrium:*

(i) If only one firm j is operational then the labor market clears at wage rate w_j^m given in (1) *and the firm's profit is Π_j^m given in* (2)*.*

(ii) If both firms are operational then the labor market clears at wage rate $w^c = A_L$, firm L makes a profit $\Pi_L^c = 0$, and firm H makes a profit $\Pi_H^c = (A_H - w^c)(w^c)^\phi$.

[9] A foundation for this assumption is given by the Coase conjecture, which implies that wage discrimination would not be possible when workers have private information about their outside options and firms can only screen workers over time by progressively increasing wage offers, as then workers would have an incentive to wait to accept a higher wage rather than a lower wage. See Gul et al. (1986) for game theoretic foundations.

Proof. See Appendix A. ■

Since $A_j < 1$ for $j \in \{L, H\}$, some workers will work in the informal sector given that all of the possible equilibrium wage rates in the proposition above are below 1. Also note that $\Pi_H^m > \Pi_H^c$ so that aggregate profits under the high productivity firm monopoly are higher than aggregate profits under competition.

Given a market clearing wage rate $w > 0$, define worker surplus as the net wages earned by workers above their outside option of working in the informal economy:

$$WS(w) = \int_0^w (w - \theta) dF(\theta) = \frac{w^{1+\phi}}{1+\phi}.$$

Because this is increasing in formal sector wages, worker welfare is highest under labor market competition, second highest when the high productivity firm is a monopoly, third highest when the low productivity firm is a monopoly, and lowest when neither firm is operational. Thus,

$$WS(w^c) > WS(w_H^m) > WS(w_L^m) > WS(0) \tag{3}$$

which clearly follows from $w^c > w_H^m > w_L^m > 0$. Note that worker surplus takes the value 0 when all workers work in the informal sector, corresponding to a situation in which formal sector wages are $w = 0$.

As for aggregate income, given that only the high productivity firm produces by hiring workers under wage competition, we can write aggregate income, as a function under both monopoly and competition as a function of the wage w that only firm j that produces pays, and this firm's aggregate productivity, A_j:

$$Y(w, A_j) = A_j w^\phi + \int_w^1 \theta dF(\theta) = A_j w^\theta + \frac{\phi}{1+\phi}\left(1 - w^{1+\phi}\right)$$

As with worker surplus, this formula also characterizes aggregate income when neither firm is operational in the formal economy, in which case wages in the formal sector are $w = 0$ and aggregate income is $\phi/(1+\phi)$ for both $j \in \{L, H\}$ — the income generated from all workers working in the informal economy. The expression for aggregate income above is increasing in w for $A_j > w$, since its derivative in w is $\phi(A_j - w)w^{-1+\phi}$. Given $A_H > w^c$, this implies

$$Y(w^c, A_H) > Y(w_H^m, A_H) > Y(w_L^m, A_L) > Y(0, A_j), \text{ for } \quad j \in \{L, H\} \tag{4}$$

Proposition 2. *Worker welfare WS and aggregate income Y are highest under competition between the firms, then under a high productivity firm monopoly, followed by a low productivity firm monopoly, and lowest when no firm is operational.*

3 Politics

3.1 Setup

We consider a repeated interaction between an incumbent ruler, an infinite set of potential challengers, and the two firms. Periods are discrete and indexed by $t = 0, 1, 2, ..., \infty$. We take as given that the labor market clears as per Proposition 1 in each period so that the workers are not part of the game, and the earnings of any firm operational in any period are its labor-market equilibrium profits described in the proposition. As per the proposition, a firm's earnings depend on whether the other firm is also operational.

At the start of the game, the ruler decides which firms to grant licenses to, and at the start of each period he decides whether or not to renew any active licenses. Only firms that have a license can operate. If no firms are operational, then the period ends immediately with the firms each receiving a zero profit and the ruler receiving a payoff of R, reflecting other political rents from holding office.

However, if at least one firm is operational then in each period that the ruler is in power, he sets tax rates $\tau_j \in [0, 1]$ on the profit of any operating firm $j \in \{L, H\}$ that earns a positive profit. Simultaneously with the ruler's tax decision(s), all operating firms that make a positive profit decide whether or not to support the ruler. Thus, if both firms are operational, the ruler is able to tax only the high productivity firm, and only this firm decides whether or not to support the ruler (refer back to Proposition 1). If the ruler has the support of this firm, then the period ends with both firms receiving their net of tax profits and the ruler collecting the tax revenue in addition to political rents R.

If a firm does not support the ruler, however, then with some positive probability the ruler is ousted from office at the end of the period—for example, in a political rebellion in which the firm sides with the opposition. When firm $j \in \{L, H\}$ does not support the ruler, then the probability the ruler is ousted is denoted by $q_j > 0$. Whether the ruler remains in office or is ousted at the end of the period, he collects the taxes that he sets in the current period in addition to that period's political rents R, prior to the period ending.

If the ruler is ousted, then one of four events occurs. First, with probability p_H he may be replaced by another ruler who is committed to allowing only firm H to operate in every subsequent period and to a tax rate $\hat{\tau}_H < 1$ on the firms' profits. Second, with probability p_L he may be replaced by a ruler who is committed to allow only firm L to operate in every subsequent period and to a tax rate $\hat{\tau}_L < 1$ on the firms' profits. These two events correspond to rulers coming into power with connections to each of the two firms.

Third, with probability p_{LH} he may be replaced by a regime that is committed to allowing both firms to operate in every subsequent period, with competition between them, and a fixed tax rate of $\hat{\tau}_{LH} < 1$ on each firm's profits in every period. In this case, firm j earns a payoff of $(1-\hat{\tau}_{LH})\Pi_j^c$ in each subsequent period (note that this is positive for firm H but 0 for firm L). These three events described so far correspond to absorbing states in which the game effectively ends.

The fourth and final event is that with probability $1-p_H-p_L-p_{LH}$ the current ruler is replaced by another one drawn from the pool of challengers, who makes decisions strategically. A ruler who is ousted never re-enters office again, and every subgame in which such a new ruler enters office is identical in structure to the whole game.

All players share a common discount factor β and our solution concept is subgame perfect equilibrium (SPE).

3.2 Remarks on the Model

As the model abstracts from many features of political and economic reality, we now provide a discussion of its simplifying assumptions and their roles in our analysis.

First, we have labeled workers not working for either firm as working in the informal sector to indicate that their activities are beyond the regulation of the ruler—e.g., the ruler does not collect taxes from these workers or the businesses that employ them. The only source of revenue for the government in our model is from firms that operate in the formal economy, which is an appropriate assumption for many countries in which government lacks the capacity to collect taxes from many sectors (Besley and Persson, 2009). However, the assumption plays no critical role in our analysis. Our main results would continue to hold even if we expanded the government's fiscal reach to these sectors.

Second, we have assumed that the ruler stays in power if he has the support of the operating firms and is vulnerable to overthrow only when he

does not have this support. We make this assumption to keep the accounting simple, but our main results carry over to the case where the ruler is vulnerable to overthrow even when all operating firms support him. Below, we will invoke further assumptions on q, allowing for instance the drop in the ruler's probability of surviving when firm H does not support him to be greater than the drop in probability when firm L does not support him.

Third, while we have assumed that rulers can restrict market entry by not granting permission to operate, there are other ways that rulers can effectively shut firms out of the market. For example, the ruler may control scarce inputs such as capital or natural resources that are essential for production, and only grant these inputs to favored firms. Alternatively, the ruler may decline to protect the property rights of certain firms from private expropriation, either by criminals or government officials. Either way, the result is the same as not granting a license: the non-favored firm cannot operate at a profit.

Fourth, our model is simplified to the case of only two firms working in a single industry but our results carry over to the case of many firms operating in different industries provided each operating firm has some political influence in the ruler's likelihood of survival. This implies the ruler will consider whether or not to grant a license to firms based on whether they can be trusted to not aid the opposition.

Finally, to simplify the analysis, we have modeled rulers who are committed to support one or other of the two firms, or to a competitive regime in which both firms operate. We can think of this regime as one that is ideologically committed to open economic competition and universal property rights. This may be either a democratic or authoritarian regime. We do not model what makes this commitment credible, but in the existing literature, they are usually seen as the product of fundamental changes in institutional arrangements (North and Weingast, 1989). In the supplemental appendix, we endogenize all of these commitment outcomes by considering an extension of the model in which rulers are heterogeneous: some are "connected" to one of the two firms and support a monopoly for their firm while others are expected to favor competition, and thus carry it out.

4 Equilibrium Analysis

4.1 Low Income Equilibria

Before we start our analysis, we introduce the assumption that the ruler's political rents R are large enough that the ruler would prefer not to give any

firm an operating license than to expose himself to the risk of overthrow. If the ruler does not allow any firm to operate, then he remains in power forever and his payoff is R. If the ruler allows a firm to operate that could act to overthrow him whenever they had the chance, then the ruler's payoff is at best:

$$\max\left\{\frac{1-\beta}{1-\beta(1-\underline{q})}(\overline{\Pi}+R),\ (1-\beta)(\overline{\Pi}+R)+\beta(1-\underline{q})R\right\}$$

$$\text{where}\quad \underline{q}:=\min\{q_L,q_H\}$$

$$\text{and}\quad \overline{\Pi}:=\max_{\tau\in[0,1],\Pi\in\{\Pi_H^m,\Pi_H^c,\Pi_L^m\}}\tau\Pi$$

The first expression inside the brackets bounds the payoff to the ruler if he is exposed to overthrow only once and then does not renew any licenses from that point on if he survives office. The second expression bounds the payoff in the case where the ruler is continually exposed to the same risk of overthrow in every period that he has survived in office. It is routine to verify that if

$$R>\frac{1-\beta}{\beta}\frac{\overline{\Pi}}{\underline{q}} \tag{A2}$$

then R exceeds the first expression. Moreover, when this inequality is satisfied the first expression exceeds the second one. Thus, under this assumption, the ruler would prefer to shut out all firms from operating than face the risk of being overthrown even just once in any period. We maintain this assumption throughout the analysis. It amounts to saying that the benefit of remaining in power is larger than any financial gains that would accrue from empowering one's potential enemies.

Under this assumption, it is clear that in a history-independent equilibrium of the game, the ruler does not grant licenses to any firm. First consider the case of providing a license to one of the firms $j\in\{L,H\}$. In a history-independent equilibrium, the firm and ruler make the same choices in every period. If the firm supports the ruler, his payoff from setting any tax rate $\tau_j<1$ would be $(1-\beta)(\tau_j\Pi_j^m+R)+\beta V$ where V is the ruler's history-independent continuation value. Here, the ruler would have an incentive to deviate to $\tau_j=1$, since this deviation does not affect V, given it is history-independent. Similarly, if the firm does not support the ruler, then his payoff from setting any tax rate $\tau_j<1$ would be $(1-\beta)(\tau_j\Pi_j^m+R)+\beta(1-q_j)V'$ where V' is the ruler's history-independent continuation value following his survival in office. So, in this case, the ruler would also have an incentive to

deviate to $\tau_j = 1$. In fact, in a history-independent equilibrium, it is optimal for the ruler to set $\tau_j = 1$. Accordingly, the firm's best-response is to withhold support for the ruler, since advocacy would generate a payoff of 0 while not supporting would generate a payoff of at least $\beta q_j p_j (1 - \hat{\tau}_j)\Pi_j^m > 0$. A similar conclusion holds if we assume that both firms are operating. Thus, in a history-independent equilibrium the ruler must run the risk of overthrow were he to grant an operating license, while assumption (A2) implies it is better to not allow any firm to operate. This also shows that a history independent equilibrium exists with the unique feature across all such equilibria that no firm is ever granted a license on the path of play.

Proposition 3. *There is a history-independent equilibrium and in any such equilibrium the ruler is expected to fully expropriate (i.e. set $\tau_j = 1$ on any operating firm j that earns a positive profit) if he ever has the choice; some operating firm is expected to not support him; and, consequently, the ruler does not grant a license to either firm.*

This equilibrium delivers the minmax values to both the firms and the ruler in any continuation game that begins at the start of a period. On any path in which the ruler granted a license to at least one of the firms, the worst equilibrium punishment that could be imposed on a firm for not supporting the ruler would be to not grant it a license ever again—not just by the present ruler if he survives office, but also by every subsequent ruler as well. Likewise, if the ruler ever deviated from an equilibrium path, the worst credible punishment that could be imposed on him is for a history-independent equilibrium to be played starting in the next period, in which no operating firm is ever expected to support the ruler again. These punishments serve as the basis of our analysis of the conditions required to support other outcome paths in equilibrium.

Fundamentally, the outcome reflects a "no property rights" regime where the ruler is unable to commit to not expropriate the firms fully, i.e. to not confiscate the entire profits earned by any operating firm. In this equilibrium, the firms have no guarantees to protection of their rights over any portion of their income, and so they do not operate, keeping aggregate income at a low level.

4.2 High Income Equilibria

Aggregate income and worker surplus are highest under an outcome in which the ruler gives licenses to both firms in every period, leading to competition between them. We now study the necessary and sufficient conditions for

such a *competitive outcome path* to be supported in equilibrium under which both firms operate in all periods of the game. For simplicity, we focus on stationary outcome paths in which the ruler sets the same tax rates every period, and firm H (the only one that makes a positive profit) makes the same decision (support or not support the ruler) in every period. We will refer to an equilibrium that supports a stationary competitive outcome path as a *high income equilibrium.*

A stationary competitive outcome path may involve the high productivity firm H not supporting the ruler in every period, in which case the ruler would prefer to set the maximum possible tax of $\tau_H = 1$ whenever possible. But such paths are ruled out by assumption (A2), as the ruler would rather not grant any licenses than run the risk of permanently losing power and his political rents. Thus, there is no "politically unstable" equilibrium in which the ruler grants a license despite not receiving political support from the firm: if a stationary high or low productivity firm monopoly path is the outcome of an equilibrium, the firm has to support the ruler in every period. We refer to such paths as *politically stable* paths.

To state the main result, we define the continuation value to firm j from the game ending following the removal of a leader by

$$\mathbf{U}_j(\tilde{U}) := p_j(1-\hat{\tau}_j)\Pi_j^m + p_{LH}(1-\hat{\tau}_{LH})\Pi_j^c + (1-p_L-p_H-p_{LH})\tilde{U}$$

where $\tilde{U}$ denotes the continuation value under the replacement ruler that acts strategically.

Proposition 4. *There is an equilibrium that supports the stationary competitive outcome path if and only if*

$$\beta \geq q_H \frac{\mathbf{U}_H(0)}{\Pi_H^c} =: \overline{\beta}_H^c$$

Proof. By assumption (A2) and the argument above, if a stationary competitive outcome path is the outcome of an equilibrium, then it must be politically stable. Let $\tau_H = \tau$ be the stationary tax rate on firm H implemented by the ruler on such a path (recall that L makes a zero profit every period on such a path). Thus $\tau\Pi_H^c + R$ is the ruler's on path time averaged payoff and $(1-\tau)\Pi_H^c$ is the firm's. The ruler has no profitable deviation from the on-path stationary tax rate if

$$\tau\Pi_H^c + R \geq (1-\beta)[\tilde{\tau}\Pi_H^c + R] + \beta\tilde{V},$$

where $\tilde{V}$ is the continuation value following the deviation from to $\tilde{\tau} \neq \tau$. As noted above, the worst equilibrium punishment for the ruler from deviating

from the path is for the history-independent equilibrium of Proposition 3 to be played from the subsequent period onwards, since this path gives him his minmax value. Thus, the lowest value that $\tilde{V}$ can take is R, and the best deviation tax rate is $\tilde{\tau} = 1$. This implies that a necessary condition for the path to be an equilibrium path is

$$\tau \geq 1 - \beta. \tag{5}$$

Firm H has no profitable deviation from the path if

$$(1-\tau)\Pi_H^c \geq (1-\beta)(1-\tau)\Pi_H^c + \beta[q_H \mathbf{U}_H(\tilde{U}) + (1-q_H)\hat{U}]$$

where $\hat{U}$ is the firm's continuation value if the incumbent ruler survives office and $\tilde{U}$, as defined above, is the firm's continuation value under a replacement ruler who acts strategically. Since the worst equilibrium punishment for deviating by not supporting the ruler is for the current ruler (if he survives office) and all subsequent rulers (if he doesn't) to play the history-independent equilibrium of Proposition 3 from the following period on, we can set $\tilde{U} = \hat{U} = 0$. This implies that a necessary condition for the firm to not have a profitable deviation from the path is

$$\tau \leq 1 - q_H \frac{\mathbf{U}_H(0)}{\Pi_H^c}. \tag{6}$$

A necessary and sufficient condition for there to exist a tax rate τ that simultaneously satisfies both inequalities (6) and (5) is the inequality stated in the proposition.

Finally, the inequality stated in the proposition is both necessary and sufficient to support the competitive outcome path because the ruler is trivially never willing to deviate from the path by not renewing firm H's license under the same history-independent equilibrium punishment. The continuation payoff that the ruler gains from deviating in this case would be R, while staying on the path would give him $\tau\Pi_j^c + R$ which is strictly larger than R since $\tau > 0$ for any τ satisfying (5). ■

Our model has a two-sided commitment problem under which the ruler may be tempted to expropriate an operating firm if the fraction of profits the firm shares with the ruler is too low; the firm may concurrently be tempted to withdraw support from the ruler if the same share is too high. These two commitment problems are non-binding when the portion of the firm's profit accruing to the ruler is at least the threshold given in equation (5)

and at most the threshold given in equation (6). If these thresholds are incompatible with each other then there is no way to simultaneously resolve these two commitment problems.

However, since the threshold $\overline{\beta}_H^c$ may not be smaller than 1, it may be impossible to resolve these two commitment problems for any value of the discount factor. Note that $\overline{\beta}_H^c < 1$ if and only if

$$q_H \frac{\mathbf{U}_H(0)}{\Pi_H^c} = q_H \left[p_H(1-\hat{\tau}_H)\frac{\Pi_H^m}{\Pi_H^c} + p_{LH}(1-\hat{\tau}_{LH}) \right] < 1$$

which holds when the profit wedge Π_H^m/Π_H^c is not too large. In particular it will hold if Π_H^m (which is larger) is close enough to Π_H^c, specifically

$$\frac{\Pi_H^m}{\Pi_H^c} < \frac{\frac{1}{q_H} - p_{LH}(1-\hat{\tau}_{LH})}{p_H(1-\hat{\tau}_H)} \tag{7}$$

The expression on the right is larger than 1 since $p_H + p_{LH} < 1$ and the tax rates are all strictly between 0 and 1. However, since the profit wedge Π_H^m/Π_H^c can be arbitrarily large, it may be that $\overline{\beta}_H^c \geq 1$.

When the profit wedge Π_H^m/Π_H^c is not too large, a high income equilibrium is politically feasible provided that the ruler and high productivity firm are sufficiently forward looking, meaning β is large enough. If, on the other hand, the profit wedge is too large or the discount factor is not high enough, then a high income equilibrium is not politically feasible.

4.3 Middle Income Equilibria

If the condition stated in Proposition 4 cannot be satisfied, then no high income equilibrium can be supported. However, there may exist an equilibrium that sustains a monopoly outcome path, under which the ruler grants an operating license to one (but not both) of the firms in every period. Again, for simplicity, we focus on stationary outcome paths. Such a path is a *high (or H) firm monopoly* (resp. *low (or L) firm monopoly*) if the high (resp. low) productivity firm operates as a monopoly in every period. We refer to an equilibrium that supports either a high- or low firm monopoly outcome path as a *middle income equilibrium* (though of course a high firm monopoly outcome generates higher income than a low firm monopoly outcome).

Proposition 5. *There is an equilibrium that supports some stationary j firm monopoly outcome path if and only if*

$$\beta \geq q_j \frac{\mathbf{U}_j(0)}{\Pi_j^m} =: \overline{\beta}_j^m$$

Proof. As in Proposition 4 every middle income equilibrium outcome must be politically stable. Again, setting $\tau_j = \tau$ to be the stationary tax rate implemented by the ruler on such a path in which firm j is operational as a monopoly in every period, we can show using similar arguments that on the ruler side we must have $\tau \geq 1 - \beta$, while on the firm side we must have

$$\tau \leq 1 - q_j \frac{\mathbf{U}_j(0)}{\Pi_j^m}.$$

Combining these two inequalities gives us the inequality stated in the proposition. And, as in Proposition 4, this inequality is both necessary and sufficient to support some firm j monopoly outcome path: the ruler would never want to deviate from the path by not renewing the license when the deviation is met by the severest equilibrium punishment. ■

The same two-sided commitment problem that features in Proposition 4 also features in Proposition 5 but is less binding. To see this, note that

$$\overline{\beta}_H^m = q_H \frac{\mathbf{U}_H(0)}{\Pi_H^m} < q_H \frac{\mathbf{U}_H(0)}{\Pi_H^c} = \overline{\beta}_H^c$$

In addition, it is always the case that

$$\overline{\beta}_j^m = q_j \frac{\mathbf{U}_j(0)}{\Pi_j^m} = q_j \left[p_j(1 - \hat{\tau}_j) + \mathbf{1}_{\{j=H\}} p_{LH}(1 - \hat{\tau}_{LH}) \frac{\Pi_H^c}{\Pi_H^m} \right] < 1$$

Therefore, whenever the competitive outcome path can be supported in equilibrium, so can the high productivity firm monopoly outcome path. In addition, there is always a nonempty range of discount factors $\beta_H^m \leq \beta < \min\{1, \beta_H^c\}$ such that the high productivity firm monopoly outcome path can be supported when the competitive outcome path cannot. In sum, a middle income outcome may be politically feasible when the outcome under a high income equilibrium is not.

However, even a middle income outcome may not be politically feasible. In particular, if $\beta < \min\{\overline{\beta}_L^m, \overline{\beta}_H^m\}$ then neither the high- nor the low- firm monopoly outcome paths can be supported in equilibrium. In this case, the only outcome that is politically feasible in the set of outcomes that we have analyzed is the low income outcome.

Another observation that we note is that even a high income equilibrium is politically feasible, it is *not* ruler-optimal. In particular, there is always a middle income equilibrium that supports the high firm monopoly outcome that gives the ruler a higher payoff than any high income equilibrium.

That is, the ruler prefers a middle income equilibrium to the high income equilibrium even when the high income equilibrium is politically feasible.

Proposition 6. *Suppose that there exists a high income equilibrium. Then, there is a middle income equilibrium that gives the ruler a strictly higher payoff than any high income equilibrium.*

Proof. We have already observed that $\overline{\beta}_H^m < \overline{\beta}_H^c$ so a middle income equilibrium that supports the high firm monopoly outcome path always exists when a high income equilibrium exists. Next, note that the ruler's payoff in a high income equilibrium is

$$\tau\Pi_H^c + R \leq \left[1 - q_H \frac{\mathbf{U}_H(0)}{\Pi_H^c}\right] \Pi_H^c + R < \left[1 - q_H \frac{\mathbf{U}_H(0)}{\Pi_H^m}\right] \Pi_H^m + R$$

where the first inequality substitutes the upper bound on τ from inequality (6), and the second uses the fact that $\Pi_H^c < \Pi_H^m$. Since the expression on the right is the ruler's payoff in the middle income equilibrium that gives him the highest payoff among those that support the high firm monopoly outcome path, the result follows. ■

Of course, the ruler would prefer any middle income equilibrium, if it exists, to the the low income history independent equilibrium outcome of Proposition 3. Therefore, if a middle income equilibrium exists, then one such equilibrium is ruler-optimal among those analyzed.

4.4 Low Firm Monopoly vs. High Firm Monopoly

While the comparison between $\overline{\beta}_H^m$ and $\overline{\beta}_H^c$ is clear, the comparison between $\overline{\beta}_L^m$ and $\overline{\beta}_H^m$ (or $\overline{\beta}_H^c$ for that matter) is ambiguous, in part because $q_L\mathbf{U}_L(0)$ and $q_H\mathbf{U}_H(0)$ cannot be ordered without further assumptions on the parameters. In particular, comparing the thresholds for the high and low firms stated in Proposition 5, we see that the threshold on β is higher for the high firm than for the low firm when

$$q_H \left[p_H(1-\hat{\tau}_H) + p_{LH}(1-\hat{\tau}_{LH})\frac{\Pi_H^c}{\Pi_H^m}\right] > q_L p_L(1-\hat{\tau}_L) \tag{8}$$

but this inequality is not guaranteed to hold since q_H may be arbitrarily small, for example. However, under the following "symmetry assumption",

$$q_H p_H(1-\hat{\tau}_H) = q_L p_L(1-\hat{\tau}_L),$$

inequality (8) will hold provided $p_{LH}(1-\hat{\tau}_{LH}) > 0$. This means there is some chance that the regime that is committed to competition comes to power and does not tax at the confiscatory rate.

The intuition is straightforward: the expected value (in units of its own monopoly payoff) for each firm from possibly transitioning to a regime that favors it is the same, but the high firm has a larger expected value from not supporting the ruler. This arises from the possibility of transitioning to the competitive regime where it makes a positive profit Π_H^c while the low productivity firm earns 0. When this is the case, the temptation to the high firm to deviate by not supporting the ruler is higher than it is for the low firm. In this case, there may be no value of a stationary tax rate that simultaneously satisfies the H firm and ruler's no-profitable-deviation constraints even when such a tax rate exists for the L firm.

If the H firm monopoly outcome path is simply not politically feasible while the L firm monopoly path is (given $\overline{\beta}_L^m \leq \beta < \overline{\beta}_H^m$), then the ruler's most preferred equilibrium will trivially be a middle income equilibrium that sustains the low firm monopoly outcome path. But even when both the high and low firm monopoly outcome paths are politically feasible (because $\beta > \overline{\beta}_H^m > \overline{\beta}_L^m$), the ruler may still prefer to do business with the low firm. To see why, note that the best high firm monopoly equilibrium outcome gives the ruler a payoff $(1-\overline{\beta}_H^m)\Pi_H^m$ while the best low firm monopoly equilibrium outcome gives him a payoff $(1-\overline{\beta}_L^m)\Pi_L^m$. When $\overline{\beta}_L^m < \overline{\beta}_H^m$ the former may be strictly larger than the latter provided the monopoly profit wedge between the high and low firms Π_H^m/Π_L^m is not too large. The intuition is again clear: even if the high productivity firm earns more than the low firm, the latter would be willing to share a larger fraction of its profits with the ruler because its alternative to supporting the ruler's regime (taking the gamble with a new regime) is worse than for the high firm.

Political Connections. There is yet another reason why we might see the ruler do business with the low productivity firm than with the high firm when both the high- and low firm monopoly equilibria are politically feasible: the ruler and high firm simply cannot coordinate on the equilibrium, whereas the low firm and ruler can. Thus, it may be that an equilibrium supporting the low firm monopoly outcome path arises even though in principle the high firm monopoly outcome path could be supported. In this scenario, the

ruler would even prefer to do business with the high productivity firm if the two sides could trust each other to resolve their commitment problems.[10]

The kind of mutual trust that is needed for the ruler and a firm to coordinate on a mutually beneficial equilibrium is most likely to arise when there is a political connection between the ruler and the firm owners. The importance of these connections for firms in middle income countries is widely attested (Fisman, 2001, Khwaja and Mian, 2005, Faccio, 2006). In many cases, the owners of the firms are even close relatives or friends of the ruler. Our illustrative cases below provide examples of this, and show more generally that existing connections play a major role in the selection of the favored firm.

Along similar lines, when a firm is strongly connected to a viable opposition (for the high firm the favorable leader that enters office with probability p_H following the incumbent's ouster, and for the low firm the one that enters with probability p_L), that firm is even less likely to be favored. The only thing worse than having weak links to the incumbent regime is having strong links to members of the popular opposition. As our cases below highlight, many successful businessmen in middle income countries approximate the ideal type of crony: politically unpopular, not especially entrepreneurial, and very close to the ruler.

5 Illustrative Cases

When examining the political economies of many middle income societies, we observe several patterns that correspond to features of our model. First, these countries contain a set of favored firms who receive some combination of freedom from expropriation and protections from the state. Second, those firms share a substantial portion of their profits with rulers, either directly (through transfers to officials and their families) or indirectly (through high levels of taxation that are subsequently diverted by officials). Third, the favored firms are those who are less politically threatening to the ruler, either because they are closely linked to the ruler or have little political power and popularity with others. Fourth, the favored firms are often inefficient relative to other potential entrants. We illustrate these features in three cases below.

[10] In addition, because the the history-independent low income equilibrium of Proposition 3 is also always an equilibrium, it is even possible that this equilibrium is played even when $\beta > \max\{\overline{\beta}_H^c, \overline{\beta}_H^m, \overline{\beta}_L^m\}$ so that if the ruler fails to coordinate and develop trust with any of the firms, the low income outcome maybe obtain.

5.1 Indonesia

In the 1960s, Indonesia was one of the poorest countries in the world. In 1967, the first year the World Bank provides an economic estimate and just two years after a military coup brought army chief of staff Suharto to power, the country had a GDP per capita of only $53, putting it in the bottom decile of the world income distribution. The main story of the subsequent three decades was one of rapid economic growth. By 1997, the year before Suharto was deposed by a popular uprising, nominal per capita GDP had grown roughly twenty-fold, to $1,055, putting it in the fourth decile of the world income distribution. While the Asian financial crisis of 1998-99 led to a major recession, Indonesia returned to its pre-crisis growth path and today remains a middle-income country.

Part of this increase, particularly in the 1970s, resulted from a surge in oil prices. However, the more sustained and interesting story was the growth of manufacturing in a country previously dominated by agriculture. Urbanization increased from 16% to 38%, and the share of manufacturing in non-mining GDP quadrupled to 40%, while employment in agriculture declined from 75% to 50% (Van der Eng, 2009). The new firms were generally domestic rather than foreign: even at its 1996 peak, FDI accounted for only 9% of investment (Temple, 2001).

The institutional context for Indonesia's economic transformation was in many aspects extremely unpromising. Suharto inherited an economy dominated by the state, and with only very weak democratic accountability. His predecessor, President Sukarno, influenced by Marxist economic theories and the ideals of decolonization, concentrated public investment in state owned firms, nationalizing most of the foremost private firms. The state funded itself by printing money, which set off hyper-inflation that peaked at 300% a year in 1965.

This growth spurt was not preceded by the development of strong institutions. Instead, Suharto ended the democratic elements of the Sukarno regime, and his rule was "almost monarchical" with no formal checks and balances (Temple, 2001). In 1996, the last full year of the Suharto regime and first year of the World Bank's Governance Indicators, Indonesia scored in the 36th percentile on the rule of law, the 23rd percentile on government effectiveness, the 22nd percentile on the control of corruption, and the 20th percentile on voice and accountability.

Economic Favoritism. The main thrust of economic policy making under Suharto was the generation of rents for favored economic actors, either by eliminating competition or through direct transfers of state resources.

McLeod (2000) lists the following ways in which Suharto favored well connected firms: i) import protections, ii) low interest loans from state-owned banks, iii) concessions to exploit natural resources, iv) designation as mandatory partners in foreign joint ventures, v) warrants to take over land, vi) ability to purchase inputs from state-owned firms at artificially low prices and vii) favorable treatment by the tax office.

The most favored category of "entrepreneurs" were members of Suharto's immediate family. Tommy Suharto, the dictator's son was a major beneficiary from the privatizations of the 1980s, buying an oil marketing company and an airline at concessionary prices. At the same time Tommy was granted the contract to build a toll highway south of the capital, a move widely interpreted as a consolation prize for losing the competition to build a toll road north of the capital to another company: his sister's. Tommy also benefited from loans via state owned banks to found new companies, such as a $650 million loan to create a "national" car company (which assembled Korean cars from kits) being especially notorious. Finally, in some cases, Tommy's companies were simply granted legal monopoly rights, such as being granted the exclusive right to buy, sell, and import cloves–a right he promptly used to lower the prices paid to farmers while raising the prices paid by consumers.

When key inputs were not for sale, the Suharto family simply took them. Tommy Suharto, for example, obtained property in Bali worth over $1 billion by expropriating land from farmers for approximately 6% of its market value. When the farmers protested, the regime used the army to evict them (Colmey and Liebhold, 1999). The hotels built on this land helped grow the Balinese tourism sector, with Bali's per capita income increasing by 270% during this period.

Protection from competition and access to cheap inputs would have meant little if Suharto could not prevent other actors from extorting producers or holding up investments. Suharto's "new order" was marked by higher levels of state capacity than the regimes that immediately preceded and followed it with an emphasis on centralized and highly coercive law and order policies (Mietzner, 2018). The most extreme example the was the use of the Indonesian Army to protect the Freeport Corporation's copper mines from locals: in 1977 the army massacred 900 villagers after an insurgent attack on the mine's slurry pipeline (Leith, 2002). The Suharto regime was less well-positioned to preempt rent-seeking by junior bureaucrats; low-level corruption remained an annoyance. Suharto was, however, willing to act dramatically if petty corruption got out of hand. He famously privatized

most of the customs service after complaints that its restrictions were holding up imports (McLeod, 2000).

The Favored Firms. The favored firms were carefully chosen so that they did not pose a threat to the regime. In the case of Suharto's relatives, the lack of threat came from family ties; their influence and wealth would decline if Suharto was removed from office. The dependence of these firms on Suharto's health was so notorious that they became the subject of a pioneering economic study on the value of political connections (Fisman, 2001). Similar considerations applied to the military officers and army units that assembled business empires using loans from state-owned banks.

Among the biggest economic beneficiaries of Suharto's regime were a small group of businessmen drawn from Indonesia's Chinese community. Though only about 1% of Indonesia's population, the Chinese community held a disproportionate share of the country's entrepreneurial experience and capital, a product of their favored status under the Dutch colonial regime. For that reason, they were an unpopular economic group domestically–so much so that anti-Chinese riots were not uncommon, and the Sukarno regime had even restricted the right of Chinese firms to engage in retail trade. The Chinese elite was, therefore, politically dependent on the Suharto regime. Any plausible political alternative, whether nationalist or Islamicist, was likely to be much more hostile towards them, while a "return" to communist China (a country most had never seen) was an even more terrifying prospect. The status of the Chinese as "politically weak but economically important" group "whose ethnicity precisely served to discount any credible future claim they could lay national political power" has been cited as a major factor in Suharto's favoritism towards them (Dunning, 2005, 459, 469).

The Chinese business groups benefited from the same mix of policies that enriched the Suharto family: "the big Sino-Indonesian conglomerates. . . have been able to benefit from deviations from free-market principles by taking advantage of privileged access to resources (particularly subsidized loans), quasi-monopoly situations, and rent-seeking opportunities" (Mackie, 1991). The largest of these firms (and, in fact, the largest firm in the country) was the Salim group, founded by an old acquaintance of Suharto, Liem Sioe Liong. The firm benefited greatly from early grants of monopolies on clove imports and flour milling to create a conglomerate that touched almost every sector of the economy, with particularly large interests in cement, petrochemicals, and steel. Suharto's golf partner, Bob Hasan, another of his cronies, benefited from access to state forest lands and the chairmanship of

a government-created cartel to control 70% of the global market in plywood (Barr, 1998).

Suharto's cronies faced the problem of skilled and well-capitalized foreign competition. In sectors where Indonesia did not have a comparative advantage, this required the creation of trade barriers, while in sectors where Indonesia did have a comparative advantage, this necessitated the creation of restrictions on foreign direct investment. Indonesia combined "non-tariff barriers and high rates of protection in manufacturing activities [with] ... extensive controls on foreign direct investment" (Bhattacharya and Pangestu, 1997, 409). Among the protected industries were Hasan's plywood processing plants (whose input prices were lowered by restrictions on the export of unprocessed lumber) and Tommy Suharto's car plants (which were protected by high tariffs and exempted from tariffs on foreign made components). In areas where foreign skills were needed, firms were allowed to enter if they partnered with connected firms (McLeod, 2000).

Chinese entrepreneurs had to pay for their privileges as "pariah capitalists" with political and financial support for the regime (Dunning, 2005). Some of this payment was public, as when in 1990 Suharto gathered the founders of the leading Chinese conglomerates on national television to pledge to 25% of their shares to cooperatives. But the more important contributions were private. Chinese companies were forced into joint ventures with firms that were controlled by army officers or Suharto family members. In addition, Chinese entrepreneurs had to provide a constant flow of bribes and "license payments" (McLeod, 2000). From such payments Suharto accumulated a personal fortune of some $16 billion.

Overall, the Indonesian economy under Suharto was inefficient relative to the first-best solution of universal property rights. Capital was allocated based on political connections rather than an assessment of potential returns. Resources were exploited haphazardly. Licenses and concessions were distributed based on political harmlessness rather than entrepreneurial skill. Nevertheless, it was under the Suharto regime that Indonesia succeeded in becoming a middle-income country. Whatever the inefficiencies of the Chinese-Indonesian conglomerates, even after massive rent payments, they represented a more efficient form of production than the subsistence agriculture and subsidized state industries that characterized the pre-Suharto economic environment.

5.2 Mexico

For much of the period from independence in 1821 until 1876, Mexico was not a unitary state, but rather a set of sub-national polities ruled by local political and military bosses battling one another for control of Mexico City. During the first 55 years of independence Mexico had 75 presidents; one strongman, Antonio Lopez de Santa Ana, occupied the presidential chair on 11 different occasions. As near as it can be measured, the Mexican economy had average *negative* growth during this period.

This spell of political instability and economic stagnation ended with the dictatorship of Porfirio Díaz who took power via a coup in 1876. Díaz remained in office until 1911, only stepping aside for a proxy candidate from 1880 to 1884. The available estimates of per capita GDP indicate that Mexico's long moribund economy achieved real rates of growth of 2.2% per year from 1900 to 1910. Although the Díaz regime was painted as a brutal dictatorship by the revolutionary regime that followed his downfall, the Porfiriato was a watershed moment in Mexican economic history.

Porfirio Díaz did not accomplish this feat by building "good institutions." Even if Díaz had wished to establish the rule of law, it was common knowledge that there was no tax base to pay for the necessary legal and administrative institutions. Díaz devoted considerable effort to undermining the few checks on his authority that existed, engineering the election of political allies to state governorships. Often these presidential favorites were outsiders to the state, and thus owed their positions to Díaz. They subsequently worked with the president to rig the elections of the federal legislature to then rubber stamp his proposals (Haber et al., 2003, Ch.3). Immediately before the revolution that toppled Díaz from power, the VDEM dataset's rule of law index scored Mexico at 0.15 (in modern terms, between Qatar and Equatorial Guinea). Savvy investors knew that connections were worth far more than rules. One prominent Mexican investor complained that his American partners' lawyer "allowed himself to be engrossed by legal arguments instead of securing other support" while he himself "spent such sums of money as might be convenient in order to insure a successful issue... [by engaging] the assistance of a prominent lawyer who had the entrée with several judges of the Supreme Court, and besides this I personally took the matter up with the President and Minister" (quoted in Wasserman (2015, 25)).

While the Díaz regime's publicists trumpeted its respect for property, the property rights of the politically unconnected were trampled. For example, one of the major projects of the Díaz period was the expropriation of the

lands of village communities. During the Porfirian period, roughly half of all village lands passed into private hands by declaring them legally "vacant" (Haber, 1995, 19-20). Attempts at protest were brutally repressed by the army and rural police (Haber, 1995, 20).

Economic Favoritism. The basic politico-economic model of Porfirian Mexico was to award lucrative privileges to a select group of merchants, financiers, and industrialists, share some of the rents generated by those privileges with potential political opponents to align their incentives with the Díaz regime, and deploy another portion of those rents to financing the infrastructural investments necessary to attract foreign capital.

One of the key tools of economic favoritism was a state-controlled banking system that could lend on concessionary terms to selected firms. In 1884 the government engineered the merger of two pre-existing banks into the Banco Nacional de México (Banamex) to create a semi-official super-bank (Maurer, 2002, Haber et al., 2003). Its charter, and the accompanying legislation, made the bank the treasury's fiscal agent, granted it a monopoly on government lending, allowed it to branch anywhere in the country, and permitted it a lower reserve ratio than other banks. In addition, the government established a tax on banknotes of five percent, and then exempted Banamex from the tax. The government also required that any new banks obtain the permission of the Secretary of the Treasury and the Federal Congress to procure a charter or to increase their capital. In return, the government received a credit line from Banamex at a below market interest rate of six percent. To accommodate existing elites, Banamex was forced to share some of its privileges with existing banks and with new banks whose charters restricted them to operate within state boundaries founded by financiers with ties to the governors of those states. As a result, Mexico's banks were, in effect, a set of investment clubs operating in non-competitive markets (Maurer and Haber, 2007). Politically-connected entrepreneurs banded together to obtain a bank charter, then sold shares to outside investors, with the capital from those sales deployed to finance their manufacturing companies.

The most important recipient of bank loans was the railway system, whose trackage increased by a factor of 20 during the Porfirian period (Coatsworth, 1979, 941). To further sweeten the deal, the government itself guaranteed construction loans and provided direct subsidies that covered approximately one third of construction costs. The railroads, however, were not simply a receiver of subsidies but a redistributor of subsidies. In the context of 19th century technology, export agriculture and mining could

only flourish near rail transport, and few such industries could bear the full cost of such an investment (Kuntz Ficker, 1995).

Financial barriers to entry were further augmented by public policy. For example, in the 1890s the Díaz government completely reformed the patent laws so that foreigners who had already developed and patented a technology or process elsewhere could receive a patent for that invention in Mexico as well. This meant the investment clubs (described above) could purchase from the patent owner the sole rights to use that technology in Mexico, thereby creating a monopoly. In cigarette manufacturing, for example, one firm, El Buen Tono, whose founding shareholders were tied to Banamex, dominated the market given it was the only firm holding the right to use the Bonsack cigarette rolling machine. It was then protected from imported cigarettes by an exemption from a 70 percent excise tax on cigarettes.

In other cases, the regime structured the tax system to favor one particular firm at the expense of both its potential competitors and its customers. The Compania Nacional Mexicana de Dinamita y Explosivos (the Mexican National Dynamite and Explosives Company) was established in 1901 through a merger of two firms that held competing charters from Díaz. First, the company persuaded the government to establish both an import tax and an excise tax on dynamite, with a subsequent grant over an exemption from both taxes. The combined taxes levied a 70% tax on potential domestic producers (assuming that they could have produced dynamite at the pre-tax cost of imports) and an 80% tariff on imports. The government further agreed that if it should ever lower either of these taxes, it would pay the company the equivalent amount per ton of explosives produced to compensate it for the drop in the level of protection. Finally, in a seeming concession by the company, it "agreed" that if dynamite prices rose beyond the "normal price", it would import the amount necessary to restore equilibrium to the market "as if it were the product of the firm's own operations." Thanks to this rule, most of its business consisted of importing dynamite from the United States and then reselling at inflated prices. The effect of this monopoly, as Mexico's miners repeatedly pointed out, was to transfer revenues from mining companies—most of which were foreign owned and sold into the U.S. market—to the stockholders of the dynamite company. One contemporary estimate suggested that the monopoly raised miners' total costs of production by three percent (Haber et al., 2003).

Tariffs also created rents for the connected at the expense of everyone else. Beginning in the 1890s, the government quite consciously honed the tariff system with an eye toward protecting favored domestic manufacturers. While it drove down the tariffs on manufactured goods that Mexico

did not produce, it simultaneously revised upwards the tariffs on goods produced by Mexico's new industries. Tariff rates in these product lines were extraordinarily high: 76 percent for bottled beer, 72 percent for common cloth, 88 percent for fine cloth, 198 percent for printing paper, 225 percent for candles, and 234 percent for soap (Haber et al., 2003).

The mechanism by which some industries obtained protective tariffs while others did not were highly political. As Márquez (2001) has shown, in effect the power to raise (or lower) tariffs resided in a single person, José Y. Limantour, Mexico's Secretary of the Treasury from 1893 to 1911. Limantour made decisions based on the principle that those industrialists who were parts of small, well-organized groups with political connections to the Díaz regime obtained trade protection, whereas everyone else did not.

One of the reasons mid-19th century Mexico was an inimical environment to start a business was endemic banditry and civil conflict. The Díaz regime took a hard line against such freelancers, most famously through the reconstitution and expansion of the rurales, a paramilitary police force with a reputation for ruthlessness. While the stability created by the rurales benefited many, their use to enforce elite property rights benefited some producers over others.

The Favored Firms. Similar to Suharto, the favored firms of the Díaz regime were either close political associates of the regime or domiciled foreigners, with a few straddling both categories. For example, Banamex's board of directors included the President of Congress, the Under-Secretary of the Treasury, the Senator for the Federal District, Porfirio Díaz's Chief of Staff (who was also the governor of the State of Morelos), and the brother of the Secretary of the Treasury. The chairman of the board of the other bank that had a nation-wide charter was the Secretary of War, and he was joined on the board by the Senator from the state of Sonora. What was true for the banks based in Mexico City was also true for state banks with federal charters, since governors had the de facto ability to determine which group of financiers would receive the federal banking charter for their state. Consequently, they or their family members either received the charter, were awarded director's seats on bank's board, or were made personal loans by the bank that they did not repay (Maurer and Haber, 2007).

The privileges of the Compañía Nacional Mexicana de Dinamita y Explosivos were also guaranteed by the connections of its owners. President Díaz's son, the Governor of Chihuahua, and the Undersecretary of the Treasury all received seats on the board of directors. As one contemporary observer put it: "...this is a country where it is claimed the Government will not al-

low a monopoly; but it is different when the Government is interested, and when the head officials are shareholders" (Haber et al., 2003). Similarly, the tobacco monopoly's board members included President Díaz's son, the Undersecretary of the Treasury, the Secretary of War, and the President of Congress (Haber et al., 2003).

Razo (2008) demonstrates the importance of political connections in the Porfirian economic system through a network analysis that links every major Mexican politician and every board member of a publicly traded Mexican business enterprise. He finds there was a small group of densely networked public officials, and that those officials were much more likely to be the directors of domestic enterprises than foreign enterprises. In essence, the more an enterprise depended on privileges from the Díaz regime, the more likely it was to have powerful political actors on its board.

Foreign entrepreneurs played an ambiguous role in the Porfirian system. Foreign firms needed strong inducements to invest in a country where expropriation was a possibility and where they would be subject to the higher operating costs imposed on them by the manufacturers of domestic inputs who operated government-created monopolies. It is therefore not surprising that foreign firms clustered in lines of economic activity where access to foreign capital markets, knowledge of necessary technologies and foreign markets, and the ability to enlist the support of their governments in disputes with the Díaz regime provided them with protection of their property rights (Haber et al., 2003).

The preferred type of capitalist under Díaz was, however, a foreigner domiciled in Mexico, who combined technical skill, isolation from politics, and a willingness to "pay up" to maintain their favored position. The Irish American Thomas Braniff, for instance, came to control hundreds of companies while functioning as Díaz's personal business advisor and partner. British businessman Sir Weetman Pearson partnered with both Díaz and his son, winning some of the first Mexican oil concessions. Jimenez-Munoz (2012) notes that "the Spaniards concentrated their interests in textiles and banking, the French in mining and banking, and the United States citizens in railroads and mining." The Mexico City Jockey club, of which Braniff was a founding member, became a place where these expatriates could form mutually profitable relations with the Mexican elite, particularly after Díaz himself joined in 1883. While tax rates in Porfirian Mexico were extremely low, favored firms who were not part of Díaz's family or entourage had to pay substantial sums in private transfers to this camarilla. Foreign firms were well-advised to retain politically-connected "intermediaries" on an annual basis, and "it was common for foreign companies to place important

government officials or their kin on their payrolls and boards of directors or to funnel stock to them" (Wasserman, 2015, 25).

Both expatriate businessmen and foreign investors were fulsome in their praise of Díaz–"a man of lofty courage, great executive ability, and fine judgment and retiring, just, generous, and fair...[who] brought his country out of comparative chaos" (Davis, 1967, 91). This praise rested on the uncomfortable knowledge that any plausible alternative regime in Mexico would be substantially more hostile to their interests. As Brown (1993) claims, "Anti-foreign sentiments united many disparate Mexican political factions," including workers groups, peasants, and the liberal opposition (p. 809). Sure enough, the Mexican revolution and the following regime of Lazaro Cardenas (1934-1940) would expropriate all the major foreign holdings in Mexico.

5.3 Thailand

In both Indonesia and Mexico during the period of rapid growth, a single man made most important political decisions without meaningful institutional constraints, and many of the favored firms were owned by his personal associates. Thailand is an example of another type of previously low-income country, where political power was exercised by a small clique or political class without meaningful institutional constraints. As in many personalistic regimes, only the very well-connected could operate successfully, and there was no diffusion of property rights. These firms tended to have ties to many elite members and elite institutions rather than a single all-powerful patron. Relative to Indonesia and Mexico however, the group of rent receivers was large and its boundaries amorphous; a political class rather than a narrow camarilla. Perhaps for this reason, Thailand's crony economy has proved relatively resilient. While the falls of Suharto and Díaz led to major losses for the favored firms, Thailand's system of partial property rights has been able to survive numerous changes.

The collective power of the Thai elite in its current form is a 20th century creation. From the founding of the Chakri dynasty in 1782 until 1932, Thailand was an absolute monarchy, where the king was the source of law. In 1932 a military coup created, once the dust settled, the form of a constitutional monarchy. The real consequence, however, was to create a partnership between the army, the throne and a small group of sympathetic civilian politicians that have dominated the country since that time, with formal control oscillating between short-lived democratically elected parliaments and the military regimes that overthrow them in the name of curtailing

corruption and restoring political stability. Since 1932 the Thai army has staged 18 coups, 11 of which successfully toppled the government. A senior officer of the Thai military has occupied the post of prime minister for 65 out of the past 91 years.

Even in its more democratic periods Thailand has not had strong institutional protections. Transparency International has regularly ranked Thailand as worse than the global average in corruption (in 2022, 101st of 178 countries), and indices of institutional protections and "quality of government" are similarly pessimistic.[11]

The absence of "good" institutions did not impede Thai economic growth. In 1960, the first year for which the World Bank provides an estimate, Thailand had a per capita GDP of only $103, putting it in the bottom quartile of the world income distribution. Over the next four decades, the economy grew immensely; on the eve of the Asian Financial Crisis of 1997-99 Thailand's per capita GDP had surpassed $3,000. The financial crisis of the late 1990s represented but a brief pause; per capita GDP began to grow again by 2001. As of this writing Thailand has a per capita income of just over $7,000, putting it almost exactly at the mid-point of the world income distribution.

Economic Favoritism. In Thailand, certain favored firms closely associated with the ruling elite have been favored by the state. Perhaps the most powerful way in which the playing field has been tilted in the Thai economy is through control of access to capital. Circa 1996, the top four banks in Thailand accounted for 54 percent of the assets of all commercial banks. These same entities controlled 15 finance companies, accounting for one-third of total finance company assets. These banks and finance companies, in turn, tended to lend to firms that were also owned by the same group, and the privileged access to credit of firms within these conglomerates gave them an advantage over potential rivals (Charumilind et al., 2006). Many of the larger banks are either owned by the state (Krungthai Bank, Government Savings Bank, Thai Military Bank) or the crown (Siam Commercial Bank). Since both the private and public banks offer loans on the basis of private relationships rather than business considerations and are thought to have implicit guarantees from the government, they tended to provide risky loans to their associates, a practice that became a major factor in the 1997 Asian financial crisis (Charumilind et al., 2006).

[11] In 2022 Thailand was ranked 92nd out of 139 countries in the International Country Risk Group's quality of government index.

At the beginning of Thailand's development process, the use of state capital to favor the elite was even less subtle: the king simply used tax money to buy assets and provide himself with startup capital. In the late 19th century, the Crown replaced labor duties with direct taxes, and 15 percent of all tax revenues were separated from the government budget and placed in the hands of a Privy Purse Bureau (PPB), which was charged with covering the (rather considerable) expenses associated with the maintenance of the royal family. As surpluses accrued in the PPB, the royal family began to deploy them for investments in commercial real estate, banking, manufacturing, and shipping. By 1918, the PPB's investments spanned rice milling, saw milling, railways, tramways, coal mines, electricity generation, banking, shipping, and manufacturing. There were three particularly noteworthy jewels; the Siam Cement Company (which effectively operated a monopoly), the Siam Commercial Bank, and investments in urban real estate that made the PPB the largest single landowner in Bangkok (Ouyyanont, 2015, Unchanam, 2020). After the 1932 coup, the military government transferred the assets of the PPB to a new body called the Crown Property Bureau (CPB), which continues to operate today.

In other cases, the government favors specific types of firms through a manipulation of the regulatory process. Competition law, for instance, has been used to punish foreign firms with a large share of the market, but goes unenforced against well-connected domestic firms guilty of identical practices (Nikomborirak, 2005). In the manufacturing sector, domestic firms are favored by import duties and domestic content requirements (McKean et al., 1994). The right to operate TV stations is also only allocated to the exceptionally well-connected (Naknoi, 2020). Consequently, connections to powerful politicians, especially members of the Cabinet, also influenced the profitability of firms (Naknoi, 2020). As Imai (2006) shows, enterprises controlled by family businesses with a family member in the Cabinet between 2001-2005 achieved rates of return ten percent higher than those of unconnected firms in the same industry.

If the government can give, it can also take away. The career of Thaksin Shinawatra (Prime Minister 2001-6) illustrates this duality. Thaksin was a former police lieutenant colonel who found initial success in business leasing IBM computers to his former colleagues in the police (Mesher and Jittrapanun, 2004). However, the real basis of Thaksin's fortune was laid in the 1990s when friends in the government granted him without competitive bidding the monopoly right to sell GSM 900 compliant cell phones, as well as several landline concessions and the right to operate a cable channel (McCargo and Pathmanand, 2005, 27-8). Initially, Thaksin's premiership saw

even greater favoritism to his business group, including concessionary tax breaks and sales of state land. However, after Thaksin was overthrown in a military coup in 2006 he saw his passport revoked, his assets frozen, and himself convicted in absentia of corruption charges.

The Favored Firms. Thaksin's fall underscored the collective power of the Thai elite, and their hostility to the idea of a single strong ruler. Whatever the nature of the regime, the country is dominated by a coalition among three powerful interconnected groups, all of whom share in control of the economy. The first is a set of Sino-Thai business tycoons who headed (and continue to head) family-based holding companies that control virtually all large-scale Thai business enterprises. These holding companies sit on the top of complex investment pyramids such that the tycoon's family owns just enough shares to control the downstream firms by naming the boards of directors and the senior managers, while leaving most of the shares in those companies in the hands of passive minority shareholders. The tycoon family therefore controls large numbers of corporations without being at full risk for bad decisions. Minority shareholders invest in full knowledge of these arrangements; they count on the political connections of the tycoon families to protect the firms' property rights and provide it with favorable public policies (Suehiro and Wailerdsak, 2004, Bertrand et al., 2008).

The second pivotal group is the Thai Army officer corps, whose upper echelons sat (and continue to sit) on the boards of the business enterprises controlled by the family-based holding companies, on the king's privy council, and in the Thai cabinet (Naknoi, 2020). The military also owns some firms, and one of the country's largest banks, directly.

The third pivotal group is the Crown—the king, his extended family, and the tax-exempt holding company that acts as its private investment arm, the Crown Property Bureau (CPB). The CPB is, in fact, the largest family-based holding company in the country. The participation of the king conferred political legitimacy on the tycoon-military-crown coalition. The monarchy as an institution is intimately tied to Thai national identity, allowing the king to emerge as the single most powerful cultural and political figure in the country. Elected governments who sought to challenge this coalition were undermined by disapproving speeches by the king or were removed by the army via coups d'etat (McCargo, 2005).

This alliance between these three groups took time to develop. In the 1930s, the monarchy and military had been rivals. But after the military was discredited by its involvement on the Japanese side in the Second World War, an anti-communist king was seen as necessary to legitimize military

government and subvert elected governments that veered too far left. King Bhumibol Adulyadej ruled from 1946 to 2016, and over the course of his reign clawed back the authority and power of the Crown. One concession he obtained almost immediately, however, was a reform of the CPB. The CPB was removed from the control of the Ministry of the Treasury; it was defined as a juristic person whose board members were chosen by the king and whose resources "depends totally on the royal inclination," while retaining its tax exemption. In short, the royal family once again had its own holding company—and that holding company was the single largest investor in the Thai economy (Ouyyanont, 2015).

The Chinese Thai were even more marginal to the governing coalition at first. Mass immigration in the late 19th century led to a popular suspicion of the emerging class of Sino-Thai business tycoons among ethnic Thai, with the King himself denouncing them as "vampires who steadily suck dry an unfortunate victim's life blood" (quoted in Unchanam (2020, 50)). The strongly nationalist—indeed, proto-fascist—military governments of the 1930s and early 1940s were even more hostile: every citizen who was not an ethnic Thai was forced to take a Thai name, Chinese schools were closed, and some Chinese enterprises were expropriated. The Sino-Thai business elite responded by offering to pay for protection; they invited high ranking army officers to join the boards of directors of their firms, compensating them with director's fees, stock distributions, and sinecures (Unchanam, 2020, Laothamatas, 1988, Dhiravegin, 1975).

As the Thai economy grew during the post World War II period, the Sino-Thai family business groups prospered. In 1997, they controlled 194 of the 220 leading business groups in the country (Suehiro and Wailerdsak, 2004). At least part of their success owed to what by then had become the long-standing practice of inviting army generals and powerful politicians on to their boards of directors (Bertrand et al., 2008, Laothamatas, 1988). This helped them gain the scarce capital necessary to grow: during the period 1930-1950 the major business groups obtained charters from the government to establish commercial banks, which they used to channel the funds to their own enterprises. Of the 20 commercial banks established during this period 14 were founded by Sino-Thai business groups, while the remaining six were founded by the CPB (Charumilind et al., 2006).

The tycoons also began to invite the CPB to join them as a passive minority investor in their projects. By 1970, the CPB held shares in over 30 companies. The two largest of these, the Siam Cement Company and the Siam Commercial Bank, were immense holding companies in their own right. By the mid-1990s, the CPB had investments in 92 enterprises, span-

ning manufacturing, insurance, banking, hotels, property development and construction, and communication. The Siam Cement company, which was one of those 92 enterprises, in turn had investments in a multitude of other companies, spanning iron and steel, ceramic tiles, petrochemicals, pulp and paper, and electrical products. The Siam Commercial Bank, which was another of the 92 CPB enterprises, in turn had investments in 77 other companies, spanning asset management, real estate, manufacturing, warehousing, mutual funds, insurance, mining, construction, entertainment, and vehicle production (Ouyyanont, 2015).

The military also played a direct role in the economy, particularly after the 1957 coup that ended a short-lived political opening. Naknoi (2020) identified over 100 military-related firms scattered across most major sectors of the economy. The most important of these were the Thai Military bank, which on founding was owned by the military itself (58%) and individual officers (42%). The bank in turn controls three "asset management companies" with a wide range of holdings. The military also owns two TV channels and a large portfolio of urban property.

By the late 1990s, the Sino-Thai family-based holding companies controlled most of the Thai private sector. Circa 1996, 93 family holding companies controlled 40 percent of the assets in the largest 2,153 publicly-traded and privately-held Thai business enterprises (Bertrand et al., 2008). As multinational enterprises entered the Thai market they were actively encouraged by the Thai government to form joint ventures with existing Thai enterprises, such that the influx of foreign capital broadened the reach of the tycoon families.

Over time, the ties between business and political worlds became even closer. Members of the families that controlled those holding companies increasingly entered politics and served on the Thai Cabinet and key army generals served on the boards of enterprises controlled by the CPB and the family-based holding companies (Laothamatas, 1988). Businessmen also served in key political positions, including Prime Minister and President of the Privy Council, under both military and democratically-elected governments (Laothamatas, 1988).

The most prominent example of such a crossover figure was Prem Tinsulanonda, who served as president of the Charoen Pokphand Foods Group, controlled by the Chearavanont family, and as honorary president of the Bangkok Bank, controlled by the Sophonpanich family (Ouyyanont, 2015). Tinsulanonda was also Commander in Chief of the Thai Army from 1978 to 1982, Minister of Defense from 1979 to 1986, Prime Minister from 1980 to 1988, and President of the Privy Council from 1998 to 2019. He is widely

acknowledged as the political mastermind of the post-war Thai political system. This example is not unique. Circa 2000, 15 percent of the directors of Thailand's corporate boards (comprising 323 publicly-traded firms) were government officials, many of them with ties to the military (Suehiro and Wailerdsak, 2004, Naknoi, 2020). The financial crisis of 1997-99 did little to change this ownership structure (Unchanam, 2020, 103). Even Thaksin Shinawatra, the most prominent political and business "outsider" in Thailand in the past quarter century, was from a well-established Sino-Chinese business family who benefited from strong military contacts and business deals with the CPB.

6 Conclusion

A goal of development policy is to find ways of improving the lives of people in the least developed societies. For all underdeveloped countries, one obvious first step is to attain moderate levels of development. However, this first step can be one that precipitates a political economy that is self-reinforcing in such a way that it inhibits further steps in development.

To see how such a first step was taken, we examined specific cases of development in Mexico, Indonesia and Thailand, evidencing how this step entailed the creation of crony-capitalist regimes defined by economic favoritism and rent-protections. Nevertheless, these countries experienced growth spurts that took many of their citizens out of poverty and enabled them to achieve living standards that—while still low in comparison to those found in Western Europe and North America—were and are higher than in the poorest societies of the world, such as those of sub-Saharan Africa.

If the system of economic favoritism and crony capitalism that we associate with many middle income countries restricts them to grow beyond a certain point, is this a sufficiently good reason for a low income country to deny itself the possibility to achieve middle-income status if it simply does not have a politically feasible direct path to becoming a high-income country? In other words, the policy implications of our analysis apply especially in cases where the alternative to being a flawed middle-income country is to be a flawed poor country with lower welfare for all citizens.

References

Acemoglu, D. (2003): "Why not a political Coase theorem? Social conflict, commitment, and politics," *Journal of comparative economics*, 31, 620–652.

——— (2006a): *Economic origins of dictatorship and democracy*, Cambridge University Press.

——— (2006b): "Modeling inefficient institutions," Tech. rep., National Bureau of Economic Research.

Acemoglu, D. and J. A. Robinson (2000): "Political losers as a barrier to economic development," *American Economic Review*, 90, 126–130.

Aiyar, M. S., M. R. A. Duval, M. D. Puy, M. Y. Wu, and M. L. Zhang (2013): *Growth slowdowns and the middle-income trap*, International Monetary Fund.

Aslund, A. (2019): *Russia's Crony Capitalism: The Path from Market Economy to Kleptocracy*, Yale University Press.

Barr, C. M. (1998): "Bob Hasan, the rise of APKINDO, and the shifting dynamics of control in Indonesia's timber sector," *Indonesia*, 1–36.

Barro, R. J. and X. Sala-i Martin (1992): "Convergence," *Journal of political Economy*, 100, 223–251.

——— (2004): "Economic growth second edition," .

Bertrand, M., S. Johnson, K. Samphantharak, and A. Schoar (2008): "Mixing family with business: A study of Thai business groups and the families behind them," *Journal of financial Economics*, 88, 466–498.

Besley, T. and M. Ghatak (2010): "Property rights and economic development," in *Handbook of Development Economics*, Elsevier, vol. 5, 4525–4595.

Besley, T. and T. Persson (2009): "The Origins of State Capacity: Property Rights, Taxation, and Politics," *The American Economic Review*, 99, 1218–1244.

Bhattacharya, A. and M. E. Pangestu (1997): "Indonesia: development transformation and public policy," in *Lessons from East Asia*, ed. by D. Leipziger, University of Michigan Press.

Charumilind, C., R. Kali, and Y. Wiwattanakantang (2006): "Connected lending: Thailand before the financial crisis," *The Journal of Business*, 79, 181–218.

Coatsworth, J. H. (1979): "Indispensable railroads in a backward economy: The case of Mexico," *The Journal of Economic History*, 39, 939–960.

Colmey, J. and D. Liebhold (1999): "The Family Firm," *Time*.

Davis, T. B. (1967): "Porfirio Díaz in the opinion of his north American contemporaries," *Revista de Historia de America*, 79–116.

Dhiravegin, L. (1975): "The Power Elite in Thailand: A General Survey with a Focus on the Civil Bureaucrats," *Asian Journal of Social Science*, 3, 1–15.

Doner, R. F. and B. R. Schneider (2016): "The middle-income trap: More politics than economics," *World Politics*, 68, 608–644.

Dunning, T. (2005): "Resource dependence, economic performance, and political stability," *Journal of conflict resolution*, 49, 451–482.

Eichengreen, B., D. Park, and K. Shin (2013): "Growth slowdowns redux: New evidence on the middle-income trap," Tech. rep., National Bureau of Economic Research.

Faccio, M. (2006): "Politically connected firms," *American economic review*, 96, 369–386.

Fisman, R. (2001): "Estimating the value of political connections," *American economic review*, 91, 1095–1102.

Gill, I. S. and H. Kharas (2015): "The middle-income trap turns ten," *World Bank Policy Research Working Paper*.

Gill, I. S., H. J. Kharas, and D. Bhattasali (2007): *An East Asian renaissance: Ideas for economic growth*, World Bank Publications.

Gul, F., H. Sonnenschein, and R. Wilson (1986): "Foundations of dynamic monopoly and the Coase conjecture," *Journal of economic Theory*, 39, 155–190.

Haber, S. (1995): *Industry and underdevelopment: the industrialization of Mexico, 1890-1940*, Stanford University Press.

Haber, S., N. Maurer, and A. Razo (2003): *The politics of property rights: political instability, credible commitments, and economic growth in Mexico, 1876-1929*, Cambridge University Press.

Imai, M. (2006): "Mixing family business with politics in Thailand," *Asian Economic Journal*, 20, 241–256.

Jimenez-Munoz, J. H. (2012): "The private business of Porfirio Díaz and the early modernization of Mexico, 1876–1911," Ph.D. thesis, The University of Texas at El Paso.

Kang, D. C. (2002): *Crony capitalism: Corruption and development in South Korea and the Philippines*, Cambridge university press.

Khwaja, A. I. and A. Mian (2005): "Do lenders favor politically connected firms? Rent provision in an emerging financial market," *The quarterly journal of economics*, 120, 1371–1411.

Kuntz Ficker, S. (1995): *Empresa extranjera y mercado interno: el Ferrocarril Central Mexicano (1880-1907)*, El Colegio de México.

Laothamatas, A. (1988): "Business and politics in Thailand: New patterns of influence," *Asian Survey*, 28, 451–470.

Leith, D. (2002): "Freeport and the Suharto regime, 1965-1998," *The Contemporary Pacific*, 14, 69–100.

Mackie, J. (1991): "Towkays and tycoons: the Chinese in Indonesian economic life in the 1920s and 1980s," in *Indonesia*, Cornell Univ Press, 83–96.

Márquez, G. (2001): *Protección y cambio institucional: la política arancelaria del porfiriato a la gran depresión*, 5, Centro de Estudios Económicos, El Colegio de México.

Maurer, N. (2002): *The power and the money: The Mexican financial system, 1876-1932*, Stanford University Press.

Maurer, N. and S. Haber (2007): "Related lending and economic performance: Evidence from Mexico," *The Journal of Economic History*, 67, 551–581.

McCargo, D. (2005): "Network monarchy and legitimacy crises in Thailand," *The Pacific Review*, 18, 499–519.

McCargo, D. and U. Pathmanand (2005): *The thaksinization of Thailand*, 4, Nias Press.

McKean, C. S., K. Toh, and W. Fisher (1994): *Export and investment promotion in Thailand*, 17, Center for Development Information and Evaluation, US Agency for ....

McLeod, R. H. (2000): "Soeharto's Indonesia: a better class of corruption," *Agenda: a journal of policy analysis and reform*, 99–112.

Mesher, G. and T. Jittrapanun (2004): "Thailand's long road to telecom reform," *ASEAN Economic Bulletin*, 21, 94–105.

Mietzner, M. (2018): "Authoritarian elections, state capacity, and performance legitimacy: Phases of regime consolidation and decline in Suharto's Indonesia," *International Political Science Review*, 39, 83–96.

Naknoi, K. (2020): "The Thai Military as a Business Group, 1940-2016," Tech. rep., Center for Economic Institutions, Institute of Economic Research ....

Nikomborirak, D. (2005): "The political economy of competition law: The case of Thailand," *Nw. J. Int'l L. & Bus.*, 26, 597.

North, D. C. and B. R. Weingast (1989): "Constitutions and commitment: the evolution of institutions governing public choice in seventeenth-century England," *The journal of economic history*, 49, 803–832.

Ouyyanont, P. (2015): *Crown property Bureau in Thailand and its role in political economy*, ISEAS–Yusof Ishak Institute Singapore.

Patel, D., J. Sandefur, and A. Subramanian (2021): "The new era of unconditional convergence," *Journal of Development Economics*, 152, 102687.

Rajan, R. G. and L. Zingales (2004): *Saving capitalism from the capitalists: Unleashing the power of financial markets to create wealth and spread opportunity*, Princeton University Press.

Razo, A. (2008): *Social Foundations of Limited Dictatorship: Networks and Private Protection During Mexico's Early Industrialization*, Stanford University Press Stanford, CA.

Suehiro, A. and N. Wailerdsak (2004): "Family business in Thailand: Its management, governance, and future challenges," *ASEAN Economic Bulletin*, 81–93.

Temple, J. (2001): "Growing into Trouble: Indonesia After 1966," in *In search of prosperity*, ed. by D. Rodrik, Princeton University Press.

Unchanam, P. (2020): *Royal capitalism: Wealth, class, and monarchy in Thailand*, University of Wisconsin Press.

Van der Eng, P. (2009): "Growth and inequality: The case of Indonesia, 1960-1997," *Working Paper*.

Wasserman, M. (2015): *Pesos and politics: Business, elites, foreigners, and government in Mexico, 1854-1940*, Stanford University Press.

Appendix

A Proof of Proposition 1

Part (i) is explained in the main text, so we only provide a proof of part (ii) here to complete the argument. We proceed by examining two cases.

Case 1: $w^c = A_L \geq w_H^m$. Note that if both firms offer the same wage, they must split the total labor L given by the supply function at this wage. Any split can be maintained in equilibrium, including one in which a firm gets no workers. However, a firm with the smallest labor force must have no more than half of it. We label any such firm j and denote the fraction of the labor captured by it when the wages are the same $\kappa \in [0, \frac{1}{2}]$.

Now suppose that the equilibrium wage is $w < A_L$. Then, firm j could offer wage $w + \epsilon$, with $\epsilon \in (0, w - A_L)$. The firm gets all the workers in the formal economy since it offers a better wage. Hence, its profit is now $\Pi_j(w + \epsilon) = A_j(w + \epsilon)^\phi - (w + \epsilon)^{(\phi+1)}$. It follows that

$$\lim_{\epsilon \to 0} \Pi_j(w + \epsilon) = A_j w^\phi - w^{(\phi+1)} > A_j \kappa w^\phi - \kappa w^{(\phi+1)} = \Pi_j(w) > 0.$$

Therefore there is some $\epsilon > 0$ such that $\Pi_j(w + \epsilon) > \Pi_j(w)$ and a profitable deviation exists for one of the firms. Therefore, we cannot have $w < A_L$.

Now, suppose that the equilibrium wage is $w > A_L$. This implies that L does not make a profit at this wage and is better off not hiring. Then, the only active firm is H and it can increase its profit by setting $w - \epsilon > A_L$. Since $w > A_L \geq w_H^m$ and the monopsony optimization problem is concave, it follows that setting a wage closer to the optimum by subtracting $\epsilon > 0$ (while maintaining a wage high enough to prevent firm L from hiring) must increase the profit of the H firm. Therefore, firm H has a profitable deviation and we cannot have $w > A_L$.

We conclude that $w = A_L$ and profits are $\Pi_L^c = 0$ and $\Pi_H^c = (A_H - w^c)(w^c)^\phi$. At this wage, firm L is indifferent between hiring or not, but in equilibrium, it will not hire. We can easily show that this is an equilibrium since there are no profitable deviations. On the one hand, firm L cannot increase the wage since it could only lower its profit and it would still get zero workers if it decreased the wage. On the other hand, firm H already captures all the available workers at this wage. If it lowers the wage below A_L, firm H will lose all its employees and get zero profit and if it increases the wage, it will get further away from its optimum without "stealing" workers from the other firm. Since the monopsony problem is concave, this can only reduce profits.

Case 2: $w^c = w_H^m > A_L$. Although, this case is ruled out by Assumption (A2), we will treat it here to cover the claim in the text preceding this inequality. In this case, firm L must not hire since it would have negative profit otherwise. Suppose that the equilibrium wage is $w \neq w_H^m$. Then, firm H would increase its profit by changing the wage to w_H^m since w_H^m is the optimum and firm L does not hire at this wage (there is no competition for labor). Hence, there is a profitable deviation for H and $w \neq w_H^m$ cannot be an equilibrium. We conclude that $w = w_H^m$ and profits are $\Pi_L^c = 0$ and $\Pi_H^c = (A_H - w^c)(w^c)^\phi$. This is indeed an equilibrium since firm L cannot offer a competing wage without getting negative profits, and firm H is offering the unique wage that maximizes the monopsony problem. □