

Institution Building and Political Accountability

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Abstract

The paper examines the role of policy intervention in catalyzing institutional change. We show that first order changes in the political structure (e.g. introduction of democracy) may be undermined by local political interests and result in persistence in institutions and the (poor) quality of governance. The paper identifies two effects of development policy as a tool for institutional change. One, by increasing political accountability, it may encourage nascent democratic governments to invest in good institutions – the incentive effect. However, we show that it also increases the incentive of the rentier elite to tighten their grip on political institutions – the political control effect. Which of these dominate determine the overall impact on institutional quality. Under some conditions, by getting the elite to align their economic interests with that of the majority, development policy can lead to democratic consolidation and economic improvement. However if the elite are deeply entrenched, then comprehensive change may require combining development policy with subsidies for the elite to modernize.

1 Introduction

Much of the recent literature has emphasized the importance of institutions and good governance for long term development.¹ However, the adoption of new institutions has had a rather mixed record. For example, the introduction of democratic institutions has failed to deliver a sustained improvement in economic outcomes in many developing countries.² Indeed, even within democratic countries such as India and Mexico and much of the Americas, there are large differences in the quality of economic institutions across regions.³ In this context, we ask when does the adoption of democratic institutions improve economic institutions and when may they get subverted by entrenched interests? In addressing this question, we also throw light on the role of development policy in catalyzing positive economic and political change.

We develop a model in which economic institutions such as the degree of property rights protection, enforcement of contracts etc. are influenced by the government's policy choices and deliberate effort at improving such institutions within the region. While most countries have a federal constitution and legal system, local governments often have considerable authority in formulating local laws or at least in their enforcement. Through their allocation (or not) of resources towards these areas of governance, the government in power can have a significant impact on the quality of economic institutions that get realized, and consequently on investment and welfare in the region. Our focus is then on the forces that affect the government's decision-making on this important dimension. In our framework, there are two groups in this region, with the majority group consisting primarily of wage-earners who are relatively poor. These wage earners stand to benefit from better economic institutions attracting increased investment into the region, thereby resulting in a rise in their wages. The other group is an economic "elite" that enjoys monopoly rents in the current (backward) institutional structure. Any change/improvement to the existing institutional set-up that may encourage other entrepreneurs to invest is likely to adversely

¹See for example, Hall and Jones (1999), Rodrik, Subramaniam and Trebbi (2004), and Acemoglu, Johnson and Robinson (2005).

²See for example, Barro (1997), Rodrik (1999), Mulligan, Gil, and Sala-i-Martin (2004). In Latin America, according to the 2003 *Latinobarometro* poll, 15 of 18 countries witnessed a significant erosion of support for democracy with over a third of the population classified as "dissatisfied democrats". Over 71% of the respondents felt that democracy had been captured by special interests. Similar results are also observed in the Eastern Europe barometer.

³Dash and Raja (2009) document big differences in indices of institutional quality they construct across Indian states. On a scale from -5 to +5, for the property rights index, they find that the measures range from a worst of -2.68 to a best of 5. Similarly, Acemoglu and Dell (2010) document find that (for the Americas) within-country differences in labor income are larger than differences across countries, and a significant portion of this disparity can be attributed to institutional differences at the sub-national level.

affect these rents earned by the minority elite. It is this potential for an adverse distributional outcome that underlies the elite's desire to control the political levers of government.

These two groups with conflicting interests seek to influence government policy with respect to economic institutions such as property rights. The citizens voice their favor or disfavor of the government at the polls by either re-electing or ousting an incumbent. In contrast, the traditional elite directly influence governmental decision-making through the offer of bribes in exchange for the government implementing their preferred outcome, namely that of a low level of property rights protection. Whether in fact the elite can do so successfully depends on the nature of the region's economic and political fundamentals. We show that for a region plagued with weak economic fundamentals or riveted by conflict on non-economic issues, elections do not provide enough of a reward for a democratic government to escape the clutches of influence by the elite. Thus despite free and regular elections, democracy remains imperfect as government policy remains "captured" by the economic elite. As a result, economic institutions remain dysfunctional and income for the majority remains low.

For a region stuck with such inefficient institutions, intervention by a policymaker who is external to the region or country provides the prospect of institutional change and economic improvement within a shorter time frame.⁴ Consider for instance, a development policy which encourages investment in a region, be it through investment in infrastructure (thereby reducing the cost of doing business there), or by tax-breaks and subsidies for those who invest in the region. We identify two channels through which such a policy can impact both political and economic institutions in the region. The first is what we call the *incentive* effect of development policy. We show that by raising accountability and rewarding good governance, such a policy encourages the government to strengthen economic institutions and improve property rights. Indeed by doing so the government also simultaneously improves the strength of its political institutions. However, there is also a second effect at work. In particular, by encouraging outside investment, development policy gives rise to the spectre of a large loss in economic rents by the elite. This prospect of an erosion in economic rents gives the elite greater incentive to tighten its grip and deploy additional resources to control the levers of government. Through this channel of a *political control* effect, development policy may therefore also have the adverse effect of potentially undermining political institutions.⁵ This double-edged aspect of policy intervention is worth emphasizing. In

⁴This formulation captures a number of plausible scenarios. For instance, this "external" policymaker may be the federal government attempting to improve both the quality of economic institutions and democracy in a backward province. Alternately, it could be a country or an international agency such as the U.N. confronting the task of transforming institutions in Afghanistan or East Timor.

⁵In Mexico, Fox (1994) cites the case of development policy in the Mihoacan province. This increased political

our model, under some conditions the incentive effect is strong enough to ensure that development policy results in not just better protection of property rights, but also transforms democracy by freeing government policy-making from the elites' grip. However, when the political control effect outweighs the incentive effect, a benign development policy can backfire by resulting in an overall deterioration in governance and the quality of the economic institutions. This result thus provides an important cautionary note in the use of development policy as a tool to transform institutions.

In an extension of the basic model, we show that development policy may also have the secondary effect of prompting the elite to change their technology closer to the frontier so as to be less dependent on an insular institutional setup for their profits. Thus it may lead to modernization indirectly. If however the elites are deeply entrenched, in that their traditional technology is very far from the technological frontier or the costs of reorganization for them are too large, development policy is unlikely to erode their "political control" of government. In such cases, democratic elections may need to be combined with developmental policy and subsidies to the elite in order to bring about comprehensive institutional change in the region.

Related literature: Our paper is clearly related to much of the recent work on the adoption and diffusion of democracy. This literature has emphasized that the adoption of democracy has come from the threat of revolution by the disenfranchised majority (Acemoglu and Robinson, 2000), the elites' aim of improving welfare by reducing the space for narrow redistributive political competition (Lizzeri and Persico, 2004), and the role of economic cleavages and group formation within the elite (Llavador and Oxoby, 2005). This positive analysis of voluntary elite-led democratization is clearly important in enhancing our understanding of the sources of the spread of democracy. However, especially since World War II, there have been many instances where the spur to democracy has been from direct and indirect forms of external influence. Such projects of institutional engineering has had mixed results. On the one end we have successes such as Japan, Germany and East Timor while on other end we have notable failures such as Somalia and Haiti (see Dobbins et. al., 2007 for a discussion). Attempts at spreading democratization and better institutions in backward regions of countries such as Brazil, Mexico and India have also had limited success. In this paper we take a first step in exploring the effects of policies aimed at bringing about comprehensive institutional change. The closest paper to ours is Acemoglu and Robinson (2008), who also explore conditions under which the introduction of democracy need not result in an improvement in economic institutions. Similarly, Acemoglu and Robinson (2000) look at conditions under participation of the individuals native to the region. At the same time, cases of election malpractice and booth capturing by the landed elite also dramatically increased.

which elites would seek to prevent development from occurring. While our analysis also derives conditions under which democracy is effectively captured by the elite, our focus is on the impact of different policies that can help mitigate or exacerbate this problem and their interaction with the local conditions, thereby helping understand which policies are more likely to succeed under what conditions. Finally, Myerson (2006, 2009) stresses the importance of building political institutions to encourage political competition for democracy to succeed. By focusing on economic policies, our paper is thus complementary to this work.

Our analysis is also related to the literature examining the relationship between institutional structure and political accountability. This literature explores the effect of different institutional setups (e.g. democracies versus autocracies (Persson and Tabellini, 2000), the size of the base of political power (de Mesquita et al., 2003)) on political accountability, economic policies and other related phenomena. While related to this literature, our contribution also explores the effect of political accountability on the institutional structure itself and how changes in one can (or cannot) bring about changes in the other. In line with recent work by Besley (2005), our framework also emphasizes the importance of political selection and leadership for good governance. Our paper emphasizes that in imperfect democracies, political selection is constrained and high quality leaders may be prevented from emerging, despite free and fair elections.

Finally, our paper is related to issues of corruption and lobbying in countries with relatively weak institutions. The recent literature on corruption has been surveyed by Mishra (2005) and Olken and Pande (2012). We share with this literature the focus on incentives to indulge in an efficiency-reducing action/policy. Our framework is also related to the literature on lobbying (e.g. Grossman and Helpman, 2001), but since we have only one group lobbying, our model avoids the intricacies involved with multiple lobby groups. The relationship between development, lobbying and corruption is described in Harstad and Svensson (2011).

The rest of the paper is organized as follows. In the next section, we describe the basic model of the political process, and characterize its effect on institutions, and consequently on the economy. Section 3 describes the model in the context of landowning elites, and analyzes their incentives to modernize in response to various interventionist policies, while Section 4 concludes.

2 Description of the Model

We begin by outlining a simple model of government capture and its effect on underlying institutions.

Investors in a particular region/province P fear that their output or returns from investment

may get appropriated or stolen. Thus, factors such as the effectiveness of institutions to enforce property rights, the efficacy of the administrative machinery, and the law and order situation in the region is crucial to their decision on whether or not to invest in this province. Now, the quality of these factors can be heavily influenced by initiatives taken (or not) by the regional government. For example, while the constitutional law maybe the same across a country, the intensity of its implementation may vary widely across regions, depending on investment by the government in building “state capacity” in the form of hiring inspectors, judicial officers, police etc. and basically taking the initiative to promote a climate where legal contracts are honored.

POLICIES: For simplicity we assume that there are two possible levels of protection: 0 or p . This gives the probability that a particular investor can reap the complete returns from his or her investment. Thus, a 0 level of protection represents a regime without any significant property rights protection, and which is unlikely to attract much investment.

The level of protection in a province is assumed to be a function of the government’s ability, resources devoted and experience in such matters of effective governance. Specifically, we assume that the level of protection in a province is

$$p \text{ with probability } a(e + xy), \text{ and is } 0 \text{ otherwise.}$$

Here, a is the government’s ability at enforcing law and order (or property rights) and is assumed to be one of two values: either high ability H , or low ability $L = 0$. Similarly, e represents the government’s efforts/resources devoted on the law and order front, and can either be 0 or 1. Thus, $e = 1$ represents the government’s initiative in enforcing a good investment climate in the province, and is a policy choice by the incumbent regional government. However, doing so is costly, and we assume that the cost of implementing $e = 1$ is given by (with an abuse of notation) e .⁶

In the above production structure, x denotes the value of experience at governance matters, and is acquired only by putting in high effort (i.e. $e = 1$) at governance; if the government puts in no effort, then $x = 0$. The years of experience in office is denoted by y . We assume that a government can be in office for at most two terms; thus $y = 0$ for new governments, and $y = 1$ for governments who get reelected for a second term.

Thus in this particular set-up, only high ability governments can bring about a good investment climate, either by putting in the requisite effort, or by virtue of their experience at good governance. For simplicity, low ability governments ($L = 0$) are always assumed to be ineffective.

⁶The level of property rights protection is modelled here as being probabilistic. Alternately, one could consider as there being two possible levels of protection regime: high or low, with government policy playing a big role (along with other random factors) in determining which regime gets implemented.

It is worthwhile to note that in the above structure, if a high ability government puts in effort $e = 1$ during its first term of office and is then reelected, the effects of good governance persists to some degree during its second term as well (even if the government puts in $e = 0$ during that term). The parameter x thus also represents the degree of persistence in this process.

INVESTMENT: Investment into this region is dependent on the level of protection that exists for investors. If the level of protection is 0, then returns to all investors get appropriated with probability 1, and thus no investment is attracted. This is a situation where there is no respect for private property. On the other hand, if the level of protection is p , then whether or not investors find investing in this province attractive depends on their investment returns, what other opportunities are available for them, and what are the costs and hassles (e.g. administrative red-tape) of investing here. We summarize all of this by a parameter θ which gives the probability that investment occurs in this province if the level of protection is p . This parameter can be influenced by the federal government or by external powers either through tax or subsidy schemes for agents choosing to invest in the region, or through infrastructure and other development projects that may reduce the cost of investing in this region. While in a latter section, we delineate the effect of these various types of policies on θ by deriving this probability from an explicit model of investment, currently we will take it as a parameter of the model, and examine its comparative static effects on political and economic institutions in the region.

While potential investors into the region can observe the level of protection and thus infer the investment climate in the province, ordinary citizens are unable to judge the nitty-gritty details of the overall level of security. However, by observing whether or not investors have decided to put down their capital in the province, citizens can infer the level of property rights protection, and thereby judge the ability and policies adopted by the incumbent government (note that investment occurs only if the level of protection is p , which itself is possible only when the government is of high ability *and* either puts in resources into law and order or is experienced enough in matters of good governance).

POLITICAL STRUCTURE: Although it may be a region with poorly developed property rights, we assume that this province is part of a larger nation in which the basic structure of democracy, namely regular elections, gets implemented. As is often observed in developing countries, while the central government may not be able to directly yield influence over the day to day activities of provincial governments, it may at least be forceful enough to uphold the conduct of regular elections. We will thus assume that elections at the regional level get conducted at fixed time intervals. At the end of every period, the incumbent government comes up for re-election at which

stage it faces a randomly drawn challenger in an election and the regional electorate may decide to retain it or choose a new government into power. As mentioned earlier, we further assume that each government can remain in power for at most 2 periods.

The political structure here is simple and focuses on the incumbent government's desire to maximize its overall rents. These rents could be those from remaining in office, which are assumed to be R , or from payoffs that interested agents may pay the government in order to influence its policies. In addition to the actual salary, R is also meant to capture the prestige and other (legal) perks enjoyed from holding office.

The electorate here consists of identical agents whose objective is to choose the government that is most likely to gain them the maximum welfare. The majority of the electorate are wage-earners who benefit from investment occurring in the region. Since the chances of this happening are higher with a high ability government in power, they would like to choose a government who is more likely to be of ability H . While citizens cannot directly tell the ability of the government in power, they can infer it from their observations about whether or not investment has occurred in the region.

All incumbents are assumed to be ex-ante identical, and that with probability h it is of high ability, and with probability $1 - h$ that of low ability. Governance being a complex, multi-faceted task, this is also assumed to be unknown to the government itself. Thus, the structure here is that of a career-concerns framework (e.g. Holmstrom, 1982, Majumdar, Mani and Mukand, 2004)⁷, in which an increased allocation of resources, by raising the chances of a higher output, can skew the voter's perception of government competence in its favor and thus enhance the government's chances of re-election.

We make the following assumption on the experience factor x .

Assumption 1: $x > h$

This ensures that proven high ability incumbents are preferred to unproven challengers, and thus get re-elected into their second term in office, even though it is anticipated that it being their last term, they will then choose effort $e = 0$.

Politics can sometimes also get dominated by non-economic issues such as ethnic, religious and social discord. The salience of such issues can differ widely among regions in a country, depending on the distributional make-up of the region and its history. We model the prevalence of non-economic issues in politics in a simple manner by assuming that in each election, with

⁷Persson and Tabellini (2000, Chapter 4) provide a useful overview of the relevance of a career concerns framework to address political economy issues. From a technical viewpoint, this assumption of the true ability a being not known ex-ante by the incumbent, avoids signaling issues in the model.

probability ε , politics is determined solely by economic issues as described above (i.e. voters care only about the economic ability of government), while with probability $1 - \varepsilon$, it is dominated by non-economic issues. In the latter case, the chances of re-election for the incumbent government, irrespective of its economic performance, is given (exogenously) by ρ . Thus, regions with a low ε are those in which economic issues take a back-seat to other orthogonal issues in determining electoral outcomes. Which particular issue is salient for the current election is only determined just prior to the election; thus it is not known to the government at the time of making its decision with respect to investing e (or not) in property rights protection.

TRADITIONAL ELITE: While investment in the province improves employment opportunities, and thus welfare, of the majority of citizens in the province, there are some whose traditional rents may be imperiled. We term this (small) group as “elites”. For example, this could be a group who hold monopoly power in some sectors of the provincial economy and may see their monopoly rents get eroded in the face of competition. They could also be a group who make heavy use of a labor-intensive technology in their production and thus their profits would fall if wages were to go up in the economy due to a greater demand for labor stemming from increased investment in the region. Per se these provincial elite, either by virtue of their information or enforcement advantage, do not require state-enforced protection to operate, and would thus like to maintain the current status-quo of a low level of property rights which dissuades outside investors from investing in the province.

These traditional elite would thus like to influence the government to not devote resources into property right protection, thereby enabling them to maintain their monopoly hold. We model the influence game in a simple manner. All elite are assumed to be identical and together lose rents M if outside investment occurs in the province. Thus they would be interested in paying a bribe b to the government to prevent it from enforcing a regime of good property rights protection. We assume that the elites are organized into a lobby group that takes into account the gains and losses of all the elites in deciding how much total bribe to offer to the government. The elites are assumed to be infinitely lived, and discount each electoral period by a factor δ .

Here, we have directly assumed that there is a conflict of interest vis-a-vis property rights protection between the elites and the majority of citizens in the province. However, this need not not always be the case. For example, better protection of property rights can lead to outsiders being more willing to bring advanced technology to the province, and which may be of benefit to the elite as well, say by complementing the present production technology of the elite. Although most of our analysis does not consider this possibility explicitly, this can be incorporated into the model by considering the case of M (the elites’ rents) being negative from the government

choosing a policy of $e = 0$ that will discourage outside investors from entering the province.

This particular political framework, which involves a dynamic game between the politician, the citizen-workers and also the elites' lobby, is similar to the structure in Coate and Morris (1999), who use it to study the adoption and persistence of policies.

2.1 Equilibrium:

In the above political structure, there are two groups of agents who seek to influence policies adopted by the government. One is the citizens, who voice their favor or disfavor of the government at the polls by either re-electing or ousting an incumbent. On the other hand are the traditional elite, whose lobby seeks to directly influence governmental decisions through the offer of bribes in exchange for the government implementing their preferred outcome, namely that of a low level of property rights protection. The government, in making its decision of whether or not to put in effort $e = 1$ into law and order and property rights enforcement weighs the potential benefits that the two groups offer.

We focus on Markov perfect equilibria (MPE) for the game, where the state of the world s in any period consists of whether the government in power is one which has been re-elected from the previous or is newly in power. A MPE here consists of strategies $b(s)$ for the elites' lobby on how much bribe to offer to the government for implementing a policy of $e = 0$, the government's strategy on what bribes to accept and what to reject (associated with the decision $e(s)$ on whether or not to put in effort), and the citizens' voting strategy $v(s)$ as a function of their observation on whether or not investment occurred in the province. A strategy profile (b, e, v) is a (Markov-perfect) equilibrium if, after any history, each player's strategy under the profile is optimal, given that he expects all other players to use their equilibrium strategies.

Consider a government in its second (and final) term in office. Given that it is its last period in office, it will put in effort $e = 0$. Hence if this government is of high ability and chose $e = 1$ in the first period, then the probability of a high level of protection this period is Hx . The more interesting part of the analysis is the decision-making in the first period i.e. when a new government has just assumed office. This is what we study now.

Consider the decision of the citizen-workers (who form the majority of the electorate) in the event when the election is determined only by economic issues. If they observe investment occurring in the province, they infer that the level of protection must be p , and therefore the government must be one of high ability who has put in effort $e = 1$. Reelecting such a government means that the probability of a high level of protection in the next period is Hx , while that from electing a random challenger is Hh ; since $x > h$, the electorate will thus reelect any government that is able

to demonstrate competence by bringing in investment.

From a new government's perspective, if it does in put in effort $e = 1$, then with probability $q_{inv} = \theta Hh$ investment occurs, and then if economic issues dominate the election, it is re-elected for a second term during which it earns rents R . If non-economic issues are salient, its probability of being reelected is ρ . Thus, its payoff from putting in high effort is $(\varepsilon q_{inv} + (1 - \varepsilon)\rho)\delta R - e$. We assume that e is small enough so that this value is positive.

On the other hand, if it accepts a bribe b from the traditional elite and puts in no effort into property rights protection, then the level of protection is 0, no investment comes in and it gets ousted from power in the event that the election is determined by economic issues. The difference between the two payoffs gives the minimum bribe level that is required for the government to be influenced into adopting a policy of no protection, and is given by $b^{\min} = \varepsilon q_{inv}\delta R - e$.

From the elites' perspective, if they do not offer a bribe to the new government, it will put in resources into property rights protection, and therefore with probability q_{inv} investment will occur and it will lose its monopoly rents M . Thus, the elites' payoff from offering no bribe is given by:

$$\begin{aligned} W_{no\ bribe} = & (1 - q_{inv})M + (\varepsilon q_{inv} + (1 - \varepsilon)\rho)\{\delta(1 - \theta Hx)M + \delta^2 W_{new}\} \\ & + (1 - [\varepsilon q_{inv} + (1 - \varepsilon)\rho])\delta W_{new} \end{aligned}$$

where W_{new} is the value (to the elite) of having a new, untried government in power. The first term on the right-hand captures the retention of rents M if outside investment does not occur, while the second and third terms capture respectively the payoffs for the elite in the case that the current government is re-elected and when it is not. In the event that investment does occur, the elite not only lose their rents this period, but also the proven high ability government gets re-elected for a second term, during which it cannot be influenced by the elite. The dynamic structure of the model brings this second effect into consideration, and as we show below, will influence the overall impact of a better investment climate on incentives for the government in devoting resources into property rights protection.

If the elite offer a bribe which the incumbent accepts and in return chooses effort $e = 0$ on law and order, then the overall payoff for the elite, gross of the bribe paid, is given by:

$$W_{bribe} = M + (1 - \varepsilon)\rho\{\delta M + \delta^2 W_{new}\} + (\varepsilon + (1 - \varepsilon)(1 - \rho))\delta W_{new}$$

Now the elite retain their monopoly rents M for sure, while as before, the second and third terms give their payoffs when the government is reelected (on non-economic issues) and when it is not, respectively.

Thus, from the elites' perspective, the difference between influencing the government and not is given by:

$$\begin{aligned} D &= W_{bribe} - W_{no\ bribe} \\ &= (1 - \varepsilon\delta)q_{inv}M + \delta\theta HxM(\varepsilon q_{inv} + (1 - \varepsilon)\rho) + \varepsilon q_{inv}\delta(1 - \delta)W_{new} \end{aligned} \quad (1)$$

Therefore, the maximum bribe that the elite will be willing to pay is $b^{\max} = D$.

Let us consider a stationary equilibrium of the game in which the elite pay a fixed bribe b to the government every period, and in return the government does not put in effort into property rights enforcement, no investment occurs and therefore in every election that is determined by economic considerations alone, a new government gets elected to power replacing the current incumbent. We consider conditions under which this can be an equilibrium of the game. The set-up here is of a short lived agent, namely the incumbent government, playing against a long-lived opponent, the infinitely-lived elite. In this framework, both are in a situation of bilateral monopoly, and clearly the bargaining protocol will determine the split of the surplus between the two. We are however interested in seeing whether the maximum that one player is willing to pay is enough to influence the action of the other (as in Coate and Morris, 1999) i.e. whether the maximum bribe that the elite are willing to pay, b^{\max} , is larger than the minimum that the government is willing to accept, b^{\min} , so that under any reasonable bargaining protocol, the two will agree to this bargain, and thus implement the policy $e = 0$ (thus resulting in a low level of property rights and thereby ensuring the perpetuation of monopoly rents for the elite).

In this stationary equilibrium, the elite get rents M every period and need to pay a bribe b to each new government. With probability $\varepsilon + (1 - \varepsilon)(1 - \rho)$, the government is ousted at the next election and is replaced by a new government. On the other hand, if the election is dominated by non-economic issues and the government is retained, the low property-rights regime continues to the next period and a fresh new government comes into power only in the period after. Thus in this stationary equilibrium, the value to the elite from a new government in power is given by:

$$\begin{aligned} W_{new} &= M - b + (\varepsilon + (1 - \varepsilon)(1 - \rho))\delta W_{new} + (1 - \varepsilon)\rho\{\delta M + \delta^2 W_{new}\} \\ \Rightarrow W_{new} &= \frac{M - b + (1 - \varepsilon)\rho\delta M}{(1 - \delta)(1 + \delta\rho(1 - \varepsilon))}. \end{aligned}$$

Inserting this into (1) gives the expression for the maximum level of bribe that the elite would be willing to pay in a stationary equilibrium with persistent bribing:

$$b^{\max} = M\{q_{inv} + \delta\theta Hx(\varepsilon q_{inv} + (1 - \varepsilon)\rho)\} \frac{1 + \delta\rho(1 - \varepsilon)}{1 + \delta\rho(1 - \varepsilon) + \delta\varepsilon q_{inv}} \quad (2)$$

This stationary equilibrium is therefore sustainable whenever this maximum willingness to pay by the elite exceeds the minimum level of bribe b^{\min} that is required to influence the incumbent government to adopt a policy of $e = 0$. This is summarized in the proposition below.

Proposition 1 *The government is influenceable and thus no protection/enforcement of property rights takes place if the following condition holds:*

$$b^{\min} = \varepsilon q_{inv} \delta R - e \leq M\{q_{inv} + \delta \theta Hx(\varepsilon q_{inv} + (1 - \varepsilon)\rho)\} \frac{1 + \delta \rho(1 - \varepsilon)}{1 + \delta \rho(1 - \varepsilon) + \delta \varepsilon q_{inv}} = b^{\max} \quad (3)$$

In this case, democracy is effectively captured by the elite. If condition (3) does not hold, then democracy works in the sense that the stationary equilibrium involves the government putting in effort into effective property rights protection.

When the condition (3) is not satisfied, the above proposition shows that the stationary equilibrium cannot involve $e = 0$. To show that in this case the equilibrium involves no bribing and effective governance i.e. $e = 1$, we need to establish that the elite do not have an incentive to deviate by offering a large enough bribe to influence the government.

For a given future value of having a new government in power W_{new} , the maximum incentive for the elite to bribe the government is still given by the condition (1). However, in a stationary equilibrium involving $e = 1$, the value of having a new government in power W_{new}^1 is now given by:

$$\begin{aligned} W_{new}^1 &= (1 - q_{inv})M + (\varepsilon q_{inv} + (1 - \varepsilon)\rho)\{\delta(1 - \theta Hx)M + \delta^2 W_{new}^1\} + (1 - (\varepsilon q_{inv} + (1 - \varepsilon)\rho))\delta W_{new}^1 \\ \Rightarrow W_{new}^1 &= \frac{M\{1 - q_{inv} + (1 - \varepsilon)\rho\delta\}}{(1 - \delta)(1 + \delta \rho(1 - \varepsilon) + \delta \varepsilon q_{inv})} \end{aligned}$$

Inserting W_{new}^1 into (1) gives the maximum bribing willingness for the elite in this case as:

$$\begin{aligned} b_1^{\max} &= (1 - \varepsilon \delta)q_{inv}M + \delta \theta HxM(\varepsilon q_{inv} + (1 - \varepsilon)\rho) + \varepsilon q_{inv} \delta \frac{M\{1 - q_{inv} + (1 - \varepsilon)\rho\delta\}}{1 + \delta \rho(1 - \varepsilon) + \delta \varepsilon q_{inv}} \\ &= M\{q_{inv} + \delta \theta Hx(\varepsilon q_{inv} + (1 - \varepsilon)\rho)\} \frac{1 + \delta \rho(1 - \varepsilon)}{1 + \delta \rho(1 - \varepsilon) + \delta \varepsilon q_{inv}} \end{aligned}$$

which is the same as given by (2). Thus the stationary equilibrium will involve no bribing and $e = 1$ only when the elite do not have an incentive to deviate from this strategy i.e. when $b_1^{\max} < b^{\min}$, which is precisely the case when (3) does not hold. Hence condition (3) exactly delineates the set of parameters under which the stationary equilibrium involves $e = 0$, and in the complementary set, the equilibrium involves $e = 1$. In the latter case, democracy works in the sense that all

governments put in effort towards good governance and there is a high probability of investment occurring resulting in gains for the general populace.

The above proposition gives the condition under which even though decision-making rests formally in the hands of a democratically elected government, the process is effectively controlled by the elite, resulting in a low level of property rights protection and consequently a low level of outside investment and low welfare for the masses in the province. We are interested in analyzing the role of the different parameters on this condition of “government-capture” and thereby understanding the effects of different policies on it.

Investment promoting policies: Consider the effects of an investment-promoting policy for this region, for example by bettering the infrastructure or more directly by reducing the cost of investment through subsidies, tax-breaks or other incentives for investors.⁸ In the context of the present model, consider an increase in θ , the probability that investment occurs when there is protection for property rights in the province. Firstly, it has the effect of rewarding good governance. As θ rises, the probability of investment in the presence of effective property rights increases. Since the government gets re-elected when the electorate perceives the benefits of better protection through increased investment, this increases the government’s incentive in putting in effort $e = 1$ (due to a higher chance of getting reelected). Thus b^{\min} rises. At the same time however, the elite too fear the increased chance of their monopoly rents getting eroded due to the increased possibility of investment occurring. Thus, the bribe they are willing to pay, b^{\max} , also rises. The following corollary to proposition 1 determines which of these two effects dominate.

Corollary 1 *There exists $\theta_1, \theta_2 \in (0, 1]$, with $\theta_1 < \theta_2$ such that for $\theta < \theta_1$ and for $\theta > \theta_2$, $b^{\min} > b^{\max}$, and therefore the elite effectively bribing the government to implement $e = 0$ is a stationary equilibrium of the game. For $\theta \in [\theta_1, \theta_2]$, democracy works to provide enough incentive to the government to put in effort $e = 1$.*

Proof. Let us rewrite the condition for effective bribing (3) as (with $q_{inv} = \theta Hh$):

$$\varepsilon \delta R \leq \frac{e}{\theta Hh} + M(1 + \delta\rho(1 - \varepsilon)) \frac{1 + \delta(\varepsilon\theta Hx + (1 - \varepsilon)\rho \frac{x}{h})}{1 + \delta\rho(1 - \varepsilon) + \delta\varepsilon\theta Hh} \quad (4)$$

When $\theta = 0$, the right-hand side of the above inequality is infinite and thus exceeds the left-hand side. By continuity, when θ (which is a measure of the rewards to good governance) is close

⁸We assume that (i) the policymaker implementing this policy is ‘external’ to the regional political game, and (ii) the policy change is unanticipated, so that the equilibrium of the regional political game before the policy gets implemented is not affected. Assumption (ii) can be relaxed to some degree but at the expense of notational and computational complexity.

to 0, the effective returns to effort for the government is very low. In such cases, the elite can offer a large enough bribe to influence the government.

The derivative of the right-hand side of the inequality with respect to θ is given by:

$$-\frac{e}{\theta^2 H h} + \frac{M(1 + \delta\rho(1 - \varepsilon))\delta\varepsilon H(x - h)}{[1 + \delta\rho(1 - \varepsilon) + \delta\varepsilon\theta H h]^2}$$

This is negative at θ close to 0, and then (since $x > h$ by assumption 1) changes sign and becomes positive beyond a certain level of θ i.e. the right-hand side of (4) is U-shaped in θ , as shown in figure (??). Thus, either for very small or very large values of θ does the right-hand side of (4) exceed $\varepsilon\delta R$, and thus only in those regions does the equilibrium involve effective bribing by the elite. ■

A change in the probability θ of attracting investment through improved property rights protection has two effects. One, by making governmental effort more visible, it rewards good governance (by raising the chances of getting reelected) and thus increases the incumbent government's incentive of putting in effort $e = 1$. This is the *incentive effect*, and serves to reduce the moral hazard problem inherent in the political set-up.

At the same time, by raising the chances of a government of high ability (who has put in effort $e = 1$) being re-elected, an increase in θ serves to also raise the efficacy of the system in re-electing able governments. Due to their experience factor x , (under assumption 1) the probability of continuing with a regime with good property rights is higher for reelected high-ability governments than a randomly chosen new government. This could be due to persistence in the type of framework that has already been put in place by such a government during its first term in office, which maybe linked to the type of bureaucrats and other administrative setup that it may have chosen to enforce good property rights in the first place. As θ increases, this fear of the increased chances of re-election of a high ability uninfluenceable government causes the elite to raise their bribe. The elite seek to prevent the political game from proceeding to the second period, where it would be beyond their sphere of influence. This is the *political control effect*, and serves to raise b^{\max} .

As the above corollary shows, the incentive effect dominates for low values of θ , while the political control effect becomes more prominent for high values of θ . Thus for a province that is initially not an investment-attracting region i.e. one with a very low θ (i.e. below θ_1) any policy that lowers the cost of investment or increases the gains from investment i.e. by raising θ , can serve to improve matters by changing the equilibrium from one with persistent bribing and no property rights to one where the government is uninfluenced by the traditional elite and makes a concerted effort $e = 1$ to improve investor protection. When θ is very small, the visibility of

government policies towards protecting the rights of investors is extremely limited and this sharply limits the government's incentive at expending effort towards such policies. By raising incentives, an increase in θ over this range has a positive effect on governance and citizen's welfare.

On the other hand, for provinces with a relatively high level of θ (i.e. close to but below θ_2), a rise in θ can sometimes have an adverse effect on a previously well-functioning political system. While increases in θ raises incentives of the government to put in effort $e = 1$ here too, at the same time it also raises the elites' fear that high ability governments beyond their sphere of influence are more likely to get recognized and thus re-elected by the electorate. This causes an increase in the bribe that the elite are willing to pay to prevent the recognition of such governments.⁹ At such ranges, the political control effect dominates, and thus any policy initiative that pushes θ beyond θ_2 can change the equilibrium from one where governments are uninfluenced and put in effort $e = 1$ to one where the elites are willing to pay a high enough bribe to get the government to put in zero effort into property rights protection. In this case, well-intentioned policy to promote investment can in fact have a debilitating effect on governance. It thus highlights the importance of local knowledge (about the effect of θ) in implementing policy even by a benevolent external agency.¹⁰

To develop a framework for thinking about specific policies to promote θ , let us assume that there are many potential investment opportunities in the province. To develop any of them requires the investment of k units of capital and ϕ units of labor, while the output from each such project is valued at I . Thus if the level of protection in the province is p , the expected return from investing k units of capital there is $pI - \phi w$, where w is the wage level in the province.¹¹ A potential investor will compare these returns with that from investing elsewhere in making his decision of whether

⁹In a related context, Crost and Johnston (2010) find that in Philippines, the effect of a large development program KALAHI-CIDSS was to increase conflict violence in the areas where this development program was implemented.

¹⁰As pointed out earlier, by taking M to be positive we have directly assumed a conflict of interest vis-a-vis property rights protection between the elites and the majority of citizens in the province. However, there can be cases where better protection of property rights benefit both the citizens and the elite. This would be the case where M is negative.

In this case, both the political control effect and the incentive effect move in the same direction and in fact amplify each other. The effect of this can be seen from inequality (11). In this case, the right-hand side is always decreasing in θ , implying that the equilibrium will involve $e = 0$ only for very low values of θ . Thus, even the lining up of the citizens' and the elites' interests is not enough to overcome the government's incentive problem only when the initial probability of investment is very low.

We are grateful to a referee for pointing out this aspect of our analysis.

¹¹Currently we take the wage as given. In the next section, we consider the effects of outside investment on the wage-rate in the province.

or not to develop an investment opportunity in the province. Suppose returns to each unit of capital elsewhere is r . Then investment in this province will occur only if the returns elsewhere is sufficiently low, specifically if $r \leq \frac{pI - \phi w}{k}$. Assuming that ex-ante the returns to capital elsewhere is uniformly distributed over the range $[0, U]$, then the probability of investment occurring in this province in the presence of protection level p is given by:

$$\frac{pI - \phi w}{Uk}$$

This thus identifies with the parameter θ in our analysis so far. In this framework, investment can be promoted by lowering the capital cost of investment k , which can be done either through providing a direct subsidy on such investment or by bettering the infrastructure in the province, thereby lowering the level of k . For example, improvement in power generation and supply can reduce the need for investors to develop their own private power supply. In terms of their impact on θ , both policies are equivalent, and their choice maybe dictated by cost factors. However, if dynamic considerations are taken into account, the effect on the equilibrium outcome of improvements in θ through a policy of subsidizing investment costs will depend on expectations about how long such a policy is expected to continue into the future. Furthermore, once the policy is stopped, θ and the equilibrium outcome are likely to return to their previous levels (say below θ_1). On the other hand, improvements in infrastructure are more likely to be permanent and if it results in pushing θ above θ_1 , is likely to result in a permanent change in the equilibrium outcome from $e = 0$ to $e = 1$. Even though infrastructure improvements maybe more costly, this additional benefit needs to be taken into account in comparing its effectiveness against a policy of direct subsidy to investors.

What are the effects of the different characteristics of the region's economic and political structure that are likely to determine whether it results in an outcome with elite capture or not? The following corollary to proposition 1 investigates the effect of the various parameters on the equilibrium.

Corollary 2 *The region of elite-capture $[0, \theta_1) \cup (\theta_1, \infty)$ shrinks as (i) the rents for the elite, M , decrease, or (ii) the cost of good governance, e , decreases, or the official rents from being in office, R , increase, or (iii) the quality of candidates, h , improves, or (iv) economic factors get more salient in determining electoral outcomes i.e. ε increases, or (v) there is lower persistence in institutional quality i.e. x falls.*

Proof. Let us rewrite condition (3) as:

$$\delta R \leq \frac{e}{\theta H h \varepsilon} + M \frac{\frac{1}{\varepsilon} + \delta(\theta H x + \frac{1-\varepsilon}{\varepsilon} \rho \frac{x}{h})}{1 + \frac{\delta \varepsilon \theta H h}{1 + \delta \rho (1-\varepsilon)}} \quad (5)$$

As determined in the proof of corollary 1, the right-hand side of (5) is U-shaped in θ , while the left-hand side is a constant, as in figure 1. An increase in R raises the left-hand side and has no effect on the right-hand side. From the figure, it is then clear that this will lower θ_1 and increase θ_2 , implying that the region where $e = 0$ shrinks. Similarly, a decrease in e or M or x or an increase in h or ε serves to lower the right-hand side of (5) without affecting the left-hand side; again, from figure 1, this serves to lower θ_1 and raise θ_2 , thus shrinking the region of elite-capture.

■

Not too surprisingly, the above corollary shows that when the costs for an incumbent for enforcing good governance are low, or the official returns from being in office, R , are high, resulting in strong incentive effects, the democratic process is more likely to generate a regime of good governance. Thus, for example, in regions with a strong history of property right protection, the incremental initiative required by a new government to ensure their continuation is likely to be small. As the corollary shows, in such regions, it will be difficult for the elite to capture the government. Similarly, in regions where the prestige from democratic office is high, resulting in a high R or attracting a pool of good quality candidates for office i.e. a high h , the democratic system should work well in ensuring good governance. This last result complements (although from a different perspective) the message of Myerson (2006) who emphasizes the importance of political competition at the local level in creating a pool of good quality candidates at the national level.

Conversely, the corollary shows that when non-economic issues dominate the electoral politics, it is easier for the elite to capture a democratically elected government. Thus, for example, regions riveted with social or religious conflict are more likely to see elites dominating the policy-making process on the economic front. In such regions, the electoral payoff to the government from investing in bettering economic outcomes for the populace is low, and hence it is not in their incentive to invest in property right protection and other features of good economic governance. The corollary also highlights the role of persistence in institutional quality on the outcome. It is when institutions of good governance are more likely to persist that one is more likely to see greater elite resistance to their development. In such a case, the elites fear that once developed, an environment of property rights protection will last significantly into the future and thus have a greater incentive to oppose their development in the first place.

2.2 Robustness of Basic result

In the model so far, for simplicity, decision-making by a high quality government who is re-elected for a second term was preordained. Due to the experience factor x , effective property rights protection was provided with probability Hx , without any policy choice on the part of the government. Thus, it led to an in-built degree of persistence in the institutional framework, but only if the incumbent were re-elected. In this section, we explore the robustness of the basic result by extending the model to allow for the possibility that a second period government can also choose between the decisions of $e_2 = 0$ or $e_2 = 1$.

The rest of the model is the same, with θ being the probability of investment occurring in the region when the level of protection is p . This protection level is determined by a combination of the government's ability a and its policy choice e : p occurs with probability ae , and is 0 otherwise. Governments can be in power for at most two periods, with an election occurring at the end of the first period, which with probability ε is decided on economic factors. The elites, who are infinitely lived, have a lobby group that can influence bribes to influence government decision-making in each period. We assume that the cost of implementing $e_2 = 1$ in the second period is given by (with an abuse of notation) e_2 .

For a re-elected government, the second period is its last period in office and thus without any incentives for the future, it would clearly choose to maximise its income by accepting a bribe. As is often done in finite-period games, we assume that at this stage, the government cares about its legacy or track-record in office. It receives an additional utility benefit Z from having outside investment occurring in the region (with associated benefits for the populace) in both periods of its governance. This benefit could either be a psychological utility of having a positive historical legacy or the indirect future gains for the electoral party of the government. The rest of the game is as before.

Again we analyse the game starting from period $T = 2$ for a re-elected government. This government could either have been re-elected on economic grounds or on non-economic grounds. The former would be the case if investment occurred at $T = 1$ and would have been the result of a high ability government putting in effort into good governance. In this case, the re-elected government weighs between accepting the elite lobby's bribe b (and choosing $e_2 = 0$) versus cementing his legacy with continuing good governance. In the latter case, investment occurs with probability θH and thus yields the government a utility level $\theta H Z - e_2$. This defines the minimum bribe level b_2^{\min} that must be offered by the elites at this stage to influence the government's decision.

The maximum level of bribe that the elite are willing to offer is their expected loss that period from the government's decision to implement property rights protection and is given by θHM . If this is less than the minimum bribe level b_2^{\min} , then in equilibrium, the elites will not be able to influence a re-elected high ability government in the second period. We now make the following assumption (similar to assumption 1) to ensure that this happens, thereby justifying the citizens' decision to re-elect a government under which outside investment happened in period $T = 1$.

Assumption 2: $\theta HZ - e_2 > \theta HM$

On the other hand, a government who was re-elected on non-economic grounds alone (without any investment having come in in the first period) has no incentives to put in effort at implementing property rights protection in the second period, and thus chooses $e_2 = 0$ even in the absence of any bribing by the elites.

Moving back to period $T = 1$, as before, we analyze the maximum willingness of the elites to bribe, b_1^{\max} , and the minimum bribe level b_1^{\min} that the government is willing to accept in order to determine the region where the government is influencable.

For a newly elected government, the payoff from accepting a bribe b at $T = 1$ is $b + (1 - \varepsilon)\rho\delta R$, as its only chance of getting re-elected is if the election was determined by non-economic factors alone. On the other hand, implementing property rights $e_1 = 1$ in the first period gives it a payoff of $(\varepsilon q_{inv} + (1 - \varepsilon)\rho)\delta R - e_1 + q_{inv}(\varepsilon + (1 - \varepsilon)\rho)\delta(\theta HZ - e_2)$. This is similar to before, except for the utility term $\theta HZ - e_2$ which the government may enjoy from a legacy of successful governance in the second period. The difference between the two gives the minimum bribe level that is required for the government to be influenced into adopting a policy of no protection:

$$b_1^{\min} = q_{inv}\delta[\varepsilon R + (\varepsilon + (1 - \varepsilon)\rho)(\theta HZ - e_2)] - e_1.$$

For the elites, the maximum willingness can again be derived from their difference in payoff between a policy of $e_1 = 1$ versus $e_1 = 0$ in the first period. This difference results not only from the difference in payoff in that period, but also its consequences for government re-election and the subsequential impact on second period policy. It is given by¹² $b_1^{\max} = W_{bribe} - W_{no\ bribe} =$

$$q_{inv}M[1 + \delta(1 - \varepsilon)\rho] + q_{inv}\varepsilon\delta(1 - \delta)W_{new} - q_{inv}(\varepsilon + (1 - \varepsilon)\rho)\delta v_{old} \quad (6)$$

where v_{old} is the elites' payoff from having a (re-elected) high ability government in office in the second period and is given by $v_{old} = (1 - \theta H)M$.

¹²Here,

$$\begin{aligned} W_{bribe} &= M - b + (1 - \varepsilon)\rho\delta\{M + \delta W_{new}\} \\ &\quad + (1 - (1 - \varepsilon)\rho)\delta W_{new} \end{aligned}$$

In a stationary equilibrium involving persistent bribing b and no property rights protection, the value of having a new government in power W_{new} is given by:

$$\begin{aligned} W_{new} &= M - b + (1 - \varepsilon)\rho\delta\{M + \delta W_{new}\} + (1 - (1 - \varepsilon)\rho)\delta W_{new} \\ \Rightarrow W_{new} &= \frac{M\{1 + (1 - \varepsilon)\rho\delta\} - b}{(1 - \delta)(1 + \delta\rho(1 - \varepsilon))} \end{aligned}$$

Using this and (6) gives the maximum bribing willingness for the elite in this case as:

$$b_1^{\max} = q_{inv}M(1 + \delta\rho(1 - \varepsilon)) \frac{1 + \delta\theta H(\varepsilon + (1 - \varepsilon)\rho)}{1 + \delta\rho(1 - \varepsilon) + \delta\varepsilon q_{inv}}$$

Similar to proposition 1 and corollary 1, the following proposition delineates the parameter range over which the elites can effectively bribe the government to implement a policy of little protection for property rights. Furthermore, this possibility of capture is maximum at both low and high values of θ , while in the intermediate range, democracy is more likely to succeed.

Proposition 2 *In the modified model, no protection/enforcement of property rights takes place if the following condition holds:*

$$b^{\min} = q_{inv}\delta[\varepsilon R + (\varepsilon + (1 - \varepsilon)\rho)(\theta H Z - e_2)] - e_1 \leq q_{inv}M(1 + \delta\rho(1 - \varepsilon)) \frac{1 + \delta\theta H(\varepsilon + (1 - \varepsilon)\rho)}{1 + \delta\rho(1 - \varepsilon) + \delta\varepsilon q_{inv}} = b^{\max} \quad (7)$$

In this case, democracy is effectively captured by the elite. There exists $\theta_1, \theta_2 \in (0, 1]$, with $\theta_1 < \theta_2$ such that for $\theta < \theta_1$ and for $\theta > \theta_2$, the elite effectively bribing the government to implement $e_1 = 0$ is a stationary equilibrium of the game; for $\theta \in [\theta_1, \theta_2]$, democracy works to provide enough incentive to the government to put in effort $e_1 = 1$ and $e_2 = 1$.

Proof. See Appendix. ■

Thus this proposition establishes that the basic result of the possibility of government capture when θ is either very small or very large holds even in this modified model where the government has an active role in determining the nature of institutions in the second period of office. Again, it is the result of the incentive effect dominating for low values of θ , while the political control effect becomes more prominent for high values of θ . In this modified model, a successful government in the first period has a much greater incentive (under assumption 2) to enact good property rights while the value from not bribing is:

$$\begin{aligned} W_{no\ bribe} &= (1 - q_{inv})M + (1 - q_{inv})(1 - \varepsilon)\rho\delta\{M + \delta W_{new}\} \\ &+ q_{inv}(\varepsilon + (1 - \varepsilon)\rho)\delta\{v_{new} + \delta W_{new}\} + (1 - q_{inv}\varepsilon - (1 - \varepsilon)\rho)\delta W_{new} \end{aligned}$$

protection in the second period too. It is fear of this possibility that induces the elite to lobby even more aggressively a new government in period $T = 1$.

3 A Model of Landowning Elites

The previous section showed that elites interested in maintaining rents from their traditional monopolized sectors will attempt to influence the government into not creating an atmosphere where competitors are attracted and their rents get eaten away. In this section, we begin by casting the basic framework into a simple model of landowning elites who use a labor-intensive technology to reap profits. Such elites desire to keep labor-wages low in order to keep their profits high. Entry of investors will raise the demand for labor leading to an increase in wages, thereby eroding profits of the traditional elite. Exploring the model in this framework helps analyze some additional effects of investment-promoting policies.

Consider E traditional elites who each own one plot of land. They currently use a technology under which each plot requires l_0 units of labor to produce output valued at A . For simplicity we assume that the labor supply function in this economy is represented by the function $L(w)$, where w is the wage of each unit of labor. If the only demand for labor is from the land-owning elites, then the wage is $w_0 = L^{-1}(El_0)$. If there are other investors who also have a demand for labor, then wages rise and the general populace (who are wage-earners) gains from it; thus the electorate would like the government to create an atmosphere where outside investment occurs in the province. The elites' interests are of course diametrically opposite: being dependent on an labor-intensive technology, their profits diminish when investment occurs and they would thus like an atmosphere that is inimical to investment.

As before, we assume that for an outside investor to develop any of the many potential investment opportunities in the province requires the investment of k units of capital and the use of ϕ units of labor, while the output from the project is valued at I . In making their decision of whether or not to develop an investment opportunity in the province, potential investors will compare these returns with that from investing elsewhere

Suppose returns to each unit of capital elsewhere is r , and ex-ante these returns are assumed to be uniformly distributed over the range $[0, U]$. Then for a given realization of r , investment will occur in this province until the returns get equated with those elsewhere:

$$(i) \text{ [capital arbitrage] } pI - \phi w(r) - kr = 0$$

where the wage w is determined from the labor supply function:

$$(ii) \text{ [labor market clearing] } n\phi + El_0 = L(w)$$

with n being the number of investment opportunities developed.

Note that the wage in this province in the absence of any outside investment is w_0 ; this is thus the minimum wage in the province. Investment in this province will occur only if the returns elsewhere is sufficiently low, specifically if the net returns at the minimum wage are positive i.e. $pI - \phi w_0 - kr \geq 0 \Rightarrow r \leq r^{\max} = \frac{pI - \phi w_0}{k}$. If investment does occur, it will push up wages above w_0 and will thus indicate to the electorate that the investment climate in the province is good enough to attract investment and so the incumbent government must be one of high ability, and therefore be rewarded by reelection.

As before, the probability of investment occurring in the presence of protection level p is $\frac{pI - \phi w_0}{Uk}$, which identifies with the parameter θ from the previous section. Consequently, from a new government's perspective, if it does in put in effort $e = 1$, then with probability $q_{inv} = \theta Hh = \frac{Hh(pI - \phi w_0)}{Uk}$ investment occurs, and it is re-elected. For simplicity, here we take $\varepsilon = 1$ i.e. economic issues are always salient in elections.

From the elites' perspective, their total loss in profits conditional on investment occurring is:

$$El_0 \int_0^{r^{\max}} (w(r) - w_0) \frac{1}{r^{\max}} dr = El_0 \frac{pI - \phi w_0}{2\phi} \equiv M$$

where $w(r)$ is obtained from the capital-arbitrage condition above.¹³

Thus, this corresponds exactly to the model of the previous section with $\frac{pI - \phi w_0}{Uk}$ being equivalent to θ in the abstract model, and $El_0 \frac{pI - \phi w_0}{2\phi}$ giving the loss in monopoly rents to the elite in the presence of property rights. Replacing θ and M by these expressions in (3) to see whether b^{\min} is less than b^{\max} thus determines if government policies on property rights are captured by the elite:

$$\delta R \leq \frac{eUk}{Hh(pI - \phi w_0)} + El_0 \frac{pI - \phi w_0}{2\phi} \frac{Uk + \delta Hx(pI - \phi w_0)}{Uk + \delta Hh(pI - \phi w_0)} \quad (8)$$

From this condition, it is easy to see that elite capture of government policy-making (resulting in poor governance) is more likely when elites' interests are particularly strong, either due to their

¹³Here, we have assumed that the only effect of outside investment on the elites occurs (negatively) through a rise in the wage-rate for labor in the province. There can however also be channels through which this effect maybe positive. For example, outside investment can bring access to modern technology that maybe complementary to the elites' production technology or can introduce greater competition (resulting in lower prices) in a sector that is used as an input into the elites' production. As implied by footnote XX, in such cases the effect of development policy in lowering θ is unambiguously good.

size E or due to their significant dependence on labor, as represented by a high l_0 . As before (analyzing corollary 1 in this context with $\theta = \frac{pI - \phi w_0}{Uk}$), we see that provinces with very high or very low investment returns I , and/or very high and very low costs of investment k , are more prone to capture by the traditional elite. As discussed in the previous section, in the low θ region, this is due to the prevalence of the incentive effect i.e. governments have very low incentives to take initiatives in bettering institutions; in the high θ region, this is due to the dominance of the political control effect whereby the elites' fear of losing political control translates into a high willingness on their part at successfully controlling the government.

As before, development policies resulting in an increase in θ can result in reducing directly the chance of government capture through the incentive effect. However, there is an additional issue that arises here. A higher level of θ leads to an increase in b^{\min} , the minimum amount of bribe that is required to influence the incumbent government. Thus, the costs to the elite of controlling the government increase. Recall that it is the elites' dependence on a labor intensive technology that leads to them fearing a rise in wages and therefore results in their desire to prevent investment occurring in the province. Suppose there exist alternative technologies which use less labor, and thus makes the elite less sensitive to increases in the wage-rate. Of course, changing to such a technology may involve substantial costs both in terms of acquiring the technology as well as reorganizing the entire production process it may entail. Thus if the elite were sure that labor wages would remain low, they would have little incentive in incurring the expenses of such a reorganization. If however the costs of ensuring low wages (through influencing governmental policies) increase, would it change their willingness to incur the required reorganization cost to modernize their technology? This is the question we explore next.

3.1 Modernization by the Elite?

Consider alternative technologies that require less than l_0 units of labor per plot of land to produce output. Adopting a new technology for any plot involves a fixed cost F , as well as per unit costs depending on how different the new mode of production is from the present one. We assume that for each plot of land, moving from the current technology of l_0 to a labor-saving technology that uses l_1 ($l_1 < l_0$) units of labor involves a total cost of $F + c(l_0 - l_1)^2$. As mentioned before, this may include the cost of actual purchase of machinery, training etc. as well as the cost of reorganization of the entire production process.

In the absence of any other motive for change, each elite landowner in deciding whether to

choose a different technology with lower labor requirement makes the following cost calculation:

$$\max_{l_1 \leq l_0} \frac{(l_0 - l_1)w_0}{1 - \delta} - c(l_0 - l_1)^2 - F \quad (9)$$

The first term is the lifetime savings on labor costs by reducing the labor requirement from l_0 to l_1 , while the latter terms are the costs of reorganization. Given that the current steady state is l_0 , it must mean that the costs of reorganization are so high that in the absence of any other compulsion the elite have no incentive for change. We accordingly make the following assumption about these costs:

Assumption 2: $4cF(1 - \delta)^2 > w_0$

Under this assumption, the value from the maximization in (9) is negative, which means that it is optimal for the landowner to not modernize in the absence of any other force.

Consider the introduction of an electoral process in the region. This introduction of democratic elections can occur either due to the region's integration with a larger nation or due to the intervention and coercive imposition of an electoral process by an external agent, be it the federal government or a foreign country or an international agency. This external imposition of elections results in de facto political power moving out of the hands of the elite and to the masses. The question is whether or not such first order political intervention results in an improvement in economic institutions and incomes for the general population.

With the advent of democracy, elites now face the additional burden of costs required to influence government policies in order to keep additional investment out and thereby keep wages at the low level of w_0 . Is this enough to get the elites to modernize?

Case I: Strong Fundamentals and Democratic Success. Consider first the case when fundamentals are "strong" in that the underlying infrastructure and economic conditions are relatively good, and the mere introduction of democracy is sufficient to provide elected leaders with the right incentives. This happens if the minimum bribe required to successfully influence the government is beyond what the elite are willing to pay i.e. where the inequality (8) fails to hold so that $b^{\min} > b^{\max}$. In this case, governance is no longer captured by the elite and economic institutions improve. This will be the case when either the mass of elites is small or their dependence on labor is low i.e. if:

$$El_0 \leq \left(\delta R - \frac{eUk}{Hh(pI - \phi w_0)} \right) \frac{2\phi}{pI - \phi w_0} / \left[\frac{Uk + \delta Hx(pI - \phi w_0)}{Uk + \delta Hh(pI - \phi w_0)} \right] = G \text{ (say)}$$

In this case the elites realize that reelection is a powerful enough tool to influence the government into exerting effort into ensuring good property rights. Thus there is a high probability that

investment will get attracted and consequently wages will rise. The expected wage in the province is now given by:

$$\begin{aligned} w^e &= w_0 + \frac{Hh}{r^{\max}} \int_0^{r^{\max}} (w(r) - w_0) dr \\ &= w_0 + Hh \frac{(pI - \phi w_0)}{2\phi} = w_0 + \Delta w \end{aligned}$$

where $\Delta w = Hh \frac{(pI - \phi w_0)}{2\phi}$ is the expected increase in wages. Facing these wages, the elites' problem of choosing the optimal technology is the same as (9), with w^e replacing w_0 . Thus the elite will choose to modernize to a labor-saving technology only if:

$$w_0 + Hh \frac{(pI - \phi w_0)}{2\phi} > 4cF(1 - \delta)^2 \quad (10)$$

IA: Democratic success and modernization by the elite. The left-hand side of (10) is increasing in the initial wage w_0 , while the right-hand side is a constant. It thus implies that it is in regions where the initial wage is already fairly high, as well as where the returns from investment I are large, that modernization is likely to take place, especially if the marginal and fixed costs of doing so, c and F , are not too high. In this case, the advent of democratic elections results in large-scale change on multiple dimensions: governance is no longer captured by the elite, property rights for outside investors improve and as a result, investment takes place and wage-income for the masses increase; at the same time, the elite also invest in modernizing their technology, thereby also eliminating their need to influence government policy on this front.

IB: Democratic success and traditional elite. On the other hand, if (10) fails, the elite remain traditional, but the introduction of a democratic political process removes both their de facto and de jure political power and they do not pose any threat to good governance. These cases are depicted in figure 2 below.

The pattern described above, wherein the introduction of democratic elections set in motion a process of institution building and economic progress has often been observed. With the collapse of the Soviet Union, free and fair elections in much of Eastern Europe be it Poland, the Czech republic, Slovenia or Hungary were sufficient to economically transform these regions. However, despite these and other instances of success, such instances of institution building are relatively infrequent.

Case II (Resistant elites): More common is the scenario where free and fair elections coexist with elite capture. Here the introduction of elections results in a superficial change in power, but at a more fundamental level (bad) institutions persist. Government policy continues to serve minority elite interests and the majority group's incomes remain low.

This situation arises when $b^{\min} < b^{\max}$ i.e. where the inequality (8) holds. Here the incumbent leader's incentives arising from the electoral process are too weak (represented by a low b^{\min}) or the interests of the elite are too strong (as indicated by a high b^{\max}) so that the elite still maintain de facto control over the government's policy process. However, maintaining political control comes at a cost to the elite. While the elite have the capability to ensure a low level of property rights in the province (thereby de facto keeping out investment) by using a bribe b^{\min} to influence all incumbent governments, this is also the cost for them of continuing with a labor-intensive technology. What if they instead adopted a technology that was less dependent on labor and thus less dependent on the need to enforce a low level of property rights?

In their calculation of gains from modernization, elites take into account the additional gain from not having to bribe the elected government i.e. they choose l_1 to maximize $\frac{(l_0 - l_1)w_0 - \frac{b^{\min}}{E}}{1 - \delta} - c(l_0 - l_1)^2 - F$. Their optimal choice for this problem is given by $l_1 = l_0 - \frac{w^e}{2c(1 - \delta)}$. Two questions arise in whether the elites would in fact wish to choose such modernization: one, at this level l_1 , is it no longer in their interest to bribe the government to put in effort $e = 0$ at good governance? and two, are their total gains from modernization positive? The first question is determined by whether the inequality (8) is satisfied at this level l_1 i.e. whether $El_1 \leq G$? For the second question, the elites' gains from modernization here are given by:

$$\begin{aligned} V_{\text{modern}} - V_{\text{trad.}} &= \max_{l_1} \frac{w_0 l_0 + \frac{b^{\min}}{E} - w^e l_1}{1 - \delta} - c(l_0 - l_1)^2 - F \\ &= \frac{b^{\min} - El_0 \Delta w}{E(1 - \delta)} + \frac{(w^e)^2}{4c(1 - \delta)^2} - F \end{aligned}$$

IIA: Democratic success with initially resistant elites. If $El_1 \leq G$ or equivalently if $El_0 \leq G + \frac{Ew^e}{c(1 - \delta)}$ and the gain $V_{\text{modern}} - V_{\text{trad.}}$ is positive, the elite will choose to modernize by choosing a labor-saving technology with $l_1 = l_0 - \frac{w^e}{2c(1 - \delta)}$ and thereby implicitly commit to not influencing the government. In this case, structural changes, when they take place, are multidimensional and dramatic: the elites modernize and democracy also thrives, as governments put in effort into enforcing property rights, investment occurs, wages rise and thus welfare of the general population improves.

IIB: Democratic Failure and Institutional Persistence. On the other hand if $El_1 \leq G$, but $V_{\text{modern}} - V_{\text{trad.}}$ is non-positive, the high fixed costs of changing their traditional technology mean that the elites do not find it worthwhile to execute that change. Consequently, the province remains stuck with elites employing a traditional technology and aiming to keep control of the government in order to retain their monopoly level of rents from employing labor at low wages. Interestingly, in this case, if the elites were to modernize, their choice of technology l_1 would

obviate their need to influence the government. Thus, the major bottleneck in this case are the fixed costs of reorganization F . Therefore policies aimed at subsidizing F could thus indirectly effect change by making it easier for the elites to modernize.

Left to their own devices, perhaps many nascent democracies would be vulnerable to elite capture and stuck with a low income. Realizing this, external policymakers have often attempted to co-opt elites in a country's nation building. Consider the ongoing nation building experiment in Afghanistan. A significant portion of the traditional elite obtains its revenue from opium production and smuggling. Not surprisingly, this group has little interest in improving institutions to promote the rule of law. Aware of this, much of recent developmental efforts are aimed at giving these landowners and opium producers incentives to switch production to other crops and engage in other economic activity (Goodson, 2005).

IIC: Democratic Failure and Elite entrenchment. Lastly consider the case when $El_1 > G$. In this case, even if the elites were to choose a less labor-intensive technology, even at the new level l_1 , they would still wish to (and find it feasible to) influence the government into not enacting a good standard of property rights protection. This is the case when either the elites are so entrenched in a labor-intensive technology (i.e. l_0 is very high so that $l_1 = l_0 - \frac{w^e}{2c(1-\delta)}$ is still high) that even with modernization they still are significantly dependent on labor, and/or the electoral incentives of the government are very poor. This is the situation which is likely to see the most persistence in traditional inefficient institutions. Here, although there is a change in the de facto political process, nothing changes in terms of economic outcomes for the general populace. It is also the situation which is perhaps the most difficult to rectify and would require both developmental policy to raise θ and thereby improve the government's incentives, *as well as* subsidies for the marginal cost c of adoption of labor-saving technology by the elites in order to significantly reduce their dependence on labor.

Of course, depending on the degree of the elites' entrenchment, it is possible that only forcible modernization of the elite or removing their source of monopoly rents is necessary for democracy to work. In practice, this would require the external policymaker to use some kind of coercive policy which results in a large scale redistribution of land and other assets. The necessity of such coercive policy is clear in many instances of nation building – from postwar Germany to Bosnia, Kosovo and East Timor (Dobbins et al, 2003). However, perhaps the classic instance where the use of coercive technology was necessary and successful is postwar Japan. In particular, the military defeat of Japan had diminished the ability of the political and economic elites to block institutional change (Kawagoe, 2000). Taking advantage of this, General MacArthur (and policymakers at SCAP) instituted an array of policy measures so as to diminish the influence of the

traditional sources of power. First, they attempted to breakup the hold of the traditional *zaibatsu* holding companies - “eighty three of the leading zaibatsu were broken up into their component parts and anti monopoly laws were passed to prevent their reestablishment” (Dobbins et al, 2003). Further, labor was given the right to organize into unions, to bargain collectively and to strike. Contemporaneously, MacArthur helped push through the most sweeping land reform bill through the Japanese Diet and oversaw its implementation. Clearly to General MacArthur, establishment of a vibrant democracy meant tackling the economic and political roots of traditional elites.¹⁴

4 Conclusion

In this paper, we analyze a model of endogenous institutional quality where the government’s initiative on improving institutions is subject to competing pressures from the electorate on one side and the traditional elite on the other. In this context, examining the role of policy intervention in effecting institutional change, we identify two effects of developmental policies. One, the incentive effect: by enhancing political accountability, they may encourage nascent democratic governments to invest in good institutions. Two, the political control effect: such developmental policies may also increase the incentive of the rentier elite to tighten their grip on political institutions. Accordingly, we argue that successful policy intervention requires good knowledge of local conditions because if the political control effect dominates, then even a well-intentioned developmental policy can result in an overall deterioration of institutional quality. Such policies also provide an indirect incentive for the elite to modernize and in essence bring their interests in line with those of the majority. In some cases, development policy coupled with subsidizing the elites’ modernization efforts can result in dramatic improvements in institutional quality and welfare.

However, we should emphasize that our simple framework explored only the broad contours of the impact of policy interventions in bringing about institutional change. There are several facets of our framework that warrant future exploration. First, the identity/objectives of the external/internal agent who facilitates institution building will in many instances be important. Information about such factors as the agent’s credibility, preferences, ability, resource constraints etc. are likely to play an important role in the elites’ decisions, both in the level of the bribe they offer as well as their choice of whether or not to modernize. Second, our analysis has focused on

¹⁴That institutional change was firmly on his mind is clear from General MacArthur’s press release on the day of the bill’s passage: “...one of the most important milestones yet by Japan in the creation of an economically stable and politically democratic society. It marks the beginning of the end of an outmoded agricultural system...These can be no firmer foundation for a sound and moderate democracy and no firmer bulwark against the pressure of an extreme philosophy” (quoted in Kawagoe, 2000).

a single region/province. In the case of multiple regions, how would success/failure in one region impact the prospects for institution building in other region(s)? Third, we have assumed the elites here to be monolithic. How would inequality among them affect the equilibrium? In the context of policy intervention, it would be of interest to study whether a policy of subsidy aimed at a specific subgroup of elites maybe enough to change the equilibrium towards one with good institutions.

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5 Appendix: Proof of Proposition 2

The first part of the proposition is already derived in the text. To prove the second part, let us rewrite (7) as:

$$\delta[\varepsilon R + (\varepsilon + (1 - \varepsilon)\rho)(\theta HZ - e_2)] \leq \frac{e_1}{q_{inv}} + M(1 + \delta\rho(1 - \varepsilon)) \frac{1 + \delta\theta H(\varepsilon + (1 - \varepsilon)\rho)}{1 + \delta\rho(1 - \varepsilon) + \delta\varepsilon q_{inv}} \quad (11)$$

where $q_{inv} = \theta Hh$. The left-hand side of the inequality is increasing in θ . To analyze the behavior of the right-hand side, let us differentiate it with respect to θ :

$$-\frac{e_1}{\theta^2 Hh} + M(1 + \delta\rho(1 - \varepsilon)) \frac{(1 + \delta\rho(1 - \varepsilon))(\varepsilon + (1 - \varepsilon)\rho) - \varepsilon h}{[1 + \delta\rho(1 - \varepsilon) + \delta\varepsilon q_{inv}]^2} \quad (12)$$

The first term of this derivative is negative. The sign of the second term is determined by $(1 + \delta\rho(1 - \varepsilon))(\varepsilon + (1 - \varepsilon)\rho) - \varepsilon h$. This is concave in ε and thus achieves its minimum at one of the extremes $\varepsilon = 0$ or $\varepsilon = 1$. In both these cases, the expression is positive implying that it is positive for all $\varepsilon \in [0, 1]$

Returning to the derivative of the right-hand side of (11) as given by (12), it is negative at close to 0 (as the negative first term dominates in that case), and then changes sign and becomes positive beyond a certain level of θ i.e. the right-hand side of (11) is U-shaped in θ , as shown in

figure 3. The left-hand side is increasing in θ . Thus, either for very small or very large values of θ does the right-hand side of (11) exceed the left-hand side, and thus only in those regions does the equilibrium involve effective bribing by the elite.