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Globalization of capital flows and the (in)disciplining of nations☆

Arthur Blouin [a], Sayantan Ghosal [b,*], Sharun W. Mukand [c]

[a] University of Toronto, Canada
[b] University of Glasgow, United Kingdom
[c] University of Warwick, CAGE and CEPR, United Kingdom

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ABSTRACT

We analyze whether the threat of capital flight "disciplines" governments and improves governance. Our findings show that the globalization of capital flows influences governance through two competing channels. When a government effectively manages domestic governance, it seeks to minimize exposure to sudden capital flight driven by external factors. In contrast, when a government fails to manage domestic governance, the threat of capital flight can impose discipline, improving governance and welfare by placing the country in a "golden straitjacket"—the disciplining effect. However, capital flight may also negatively affect governance quality. As a result, this paper proposes a novel and qualified role for modest capital controls. Finally, we present evidence consistent with the predictions of our theoretical framework.

1. Introduction

In recent decades, there have been significant reductions in the cost of moving capital across borders, leading to a sharp increase in financial market integration (Passari and Rey, 2015).[1] Despite this deeper integration, empirical studies suggest that the welfare benefits of capital flows remain elusive (Rey, 2014).[2] This paper addresses this puzzle by examining an overlooked aspect of the globalization of capital flows: governance quality. Specifically, we investigate whether the threat of capital flight pressures governments to improve governance. By analyzing the link between governance and globalization, we shed light on the role of the political economy of capital controls.

There are contrasting views on the impact of globalization on the quality of governance. Summers (2000) and Obstfeld (1998) argue that globalization improves governance by imposing discipline. In an environment where information is accessible and capital is mobile, governments must implement sound policies to attract investment.[3] Similarly, Kose et al. (2009) and Mishkin (2007) emphasize that global capital flows enhance market discipline and governance. In contrast, Rodrik and Subramaniam (2009), Stiglitz (2010), and Krugman (1999) argue that globalization can incentivize indiscipline and mismanagement. The IMF has recently

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* Corresponding author.
E-mail address: Sayantan.Ghosal@glasgow.ac.uk (S. Ghosal).

[1] Financial market integration is now extensive enough that it has expanded beyond OECD and emerging market economies, reaching many frontier-market developing countries Schipke (2015).

[2] These findings align with the results of Gournichas and Jeanne (2005), as well as Coeurdacier et al. (2020). See Carrieri et al. (2013) for related evidence on implicit barriers limiting market integration in emerging economies.

[3] Obstfeld (1998) contends that "the main potential positive role of international capital markets is to discipline policymakers". Friedman (2000) extends this view, suggesting that globalization forces governments into a "golden straitjacket", restricting excesses and rewarding socially optimal policies with capital inflows.

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endorsed capital controls for macroprudential purposes Bhargava et al. (2023). Reconciling these opposing views is a challenge. The relationship between globalization and governance is complex, and the empirical evidence is mixed.[4]

This paper develops a framework to examine the impact of the globalization of foreign investment on governance in a small open economy with an export sector. Although foreign investment utilizes domestic factors, the government provides a public good that influences the returns on this investment. The first conceptual innovation of the model is a rich framework that analyzes decision-making inefficiencies within the government.

Following Tirole (1994) and Dewatripont and Maskin (1995), this paper highlights a credibility problem in government decision making. The government cannot compel other actors, public sector managers, local governments, or financial regulators, to implement efficient policies through an incentive-compatible contract that ensures high public good productivity. This approach captures governmental inefficiencies driven by state capacity limitations, lobbying, and electoral concerns.

Second, we assume that foreign investors invest capital in the host country's export sector. Critically, this investment occurs over time, allowing us to analyze the sensitivity of capital flows to information about the country's productivity and governance. Foreign investors also face a *commitment* problem. They cannot commit to retain their investment in the host country. Investors can respond to new information by maintaining the existing investment already made or participating in capital flight. The threat of capital flight is significant because the debt instrument used to mobilize foreign investment requires rollover.

We analyze the impact of globalization of capital flows on governance through the lens of two commitment problems: the government's credibility in decision-making and the foreign investors' commitment problem. A government that can effectively manage domestic governance can enforce a wage contract that incentivizes high effort from bureaucrats. Such a government seeks to limit exposure to sudden capital flight triggered by external factors. However, imposing capital controls makes foreign investment less attractive by restricting investors' ability to withdraw capital when returns are low.

When the government cannot resolve domestic governance issues, the threat of capital flight can impose discipline, improving governance and welfare by placing the country in a "golden straitjacket. Poor governance occurs when policymakers cannot credibly threaten bureaucrats with low wages for poor effort, resulting in low bureaucratic effort. Bureaucrats recognize that any threat not to complete the project is empty (see Tirole, 1994). The threat of capital flight, by making bureaucrat payoffs contingent on project completion, helps resolve this inefficiency and hardens the government's budget constraint. If investors can easily withdraw funds, bureaucrats cannot earn a bonus, which is conditional on the continuation of the public project.

However, there is an important caveat. For the threat of capital flight to be an effective disciplinary tool, changes in public good productivity and export revenue must be driven by bureaucratic effort *not* by factors beyond bureaucratic control. If capital flight is triggered by external factors, it worsens governance. In this case, modest restrictions on capital mobility, such as capital controls, can improve governance.

The threat of capital flight can be eliminated if the government issues a debt contract without rollover requirements or if the creditor commits not to withdraw (e.g., the IMF or an official bilateral creditor). Without the threat of capital flight, high bureaucratic effort becomes crucial for initiating projects. If bureaucratic effort is contractible, the government will induce a high level of effort. If not, the government lacks the incentive to initiate projects and creditors will not invest. An official lender like the IMF can strengthen the state capacity to make the bureaucratic effort contractible. By doing so, it reduces the reliance on the threat of capital flight as a disciplinary tool, ensuring high-quality public projects and attracting foreign investment.

In a globalized world, governments are vulnerable to sudden changes in investor sentiment. A crisis in one country can trigger a perceived increase in external adversity for similar countries. We show that such a shift has a clear negative impact on bureaucratic governance. Our empirical analysis, guided by the theoretical framework, uses the 1994 Mexican currency crisis as a natural experiment. The model predicts that the negative impact of increased external adversity on governance is greatest in countries similar to Mexico *and* have relatively weak institutional capacity. Our findings provide suggestive evidence consistent with this prediction.

Related Literature: A growing body of literature explores the link between capital globalization, financial crises, and governance. Our work is perhaps most closely related to Broner and Ventura (2016).[5] In their model, financial globalization allows foreign participation in domestic capital markets, altering the mix of foreign and domestic investors. If domestic markets are sufficiently deep, the paper shows that financial globalization disciplines governments by removing the incentive for opportunistic default, which expropriates foreign investment. In contrast, our model assumes that all investors are foreign and abstract from the mechanism driving their results. Instead, we introduce two key features: first, we emphasize how government decision making is influenced by the sensitivity of capital flows in a globalized world, complementing their analysis; second, we examine the differences in economic structures focusing on the degree of economic diversification.

Cai and Treisman (2005) examined how globalization-driven competition for international capital may discipline governments. They argue that this effect depends on differences in the endowments of resources of countries, such as capital, human capital, or infrastructure. In contrast, we contend that the threat of capital flight can affect governance even when countries have the same endowments, productivity, and state capacity. We show that differences in economic uncertainty alone can influence the welfare costs of capital mobility.

Qian and Roland (1996), in the context of fiscal federalism, use an incomplete contractual structure to show that governments tend to bail out failing state enterprises. They argue that federalism disciplines regional governments by allowing corrupt

[4] See Tytell and Wei (2004) and Satyanath (2007) for discussions on the mixed evidence.

[5] Varela (2018) also examines the globalization of capital, but her focus is on firm productivity, whereas we focus on incentives for high bureaucratic effort.

governments to be punished through capital flight. Our model differs by allowing for complete contracts. However, we show that, under certain conditions, the contract between the government and the bureaucrat will still hinge on project completion, aligning the bureaucrat's payoff with successful outcomes.

Ju and Wei (2010) highlight the bidirectional relationship between international capital flows and the strength of domestic institutions.[6] However, their primary focus is on the implications of globalization for corporate governance and financial system strength, rather than inefficiencies in government decision-making. Tressel and Verdier (2007) argue that capital flow liberalization is often an endogenous decision, enacted with the collusion of foreign banks and investors, often to the detriment of domestic financial system governance. These views on globalization and governance differ from the focus of this paper.

Besley and Smart (2002) demonstrated that the effect of competition for mobile capital depends on the type of politicians in office. Chang (2011) shows that short-term capital mobility interacts with elections, amplifying the impact of exogenous shocks. Although our paper focuses on decision making within government, we acknowledge that political-economic factors can exacerbate inefficiencies. Mukand (2006) uses a signaling model to show how governments may enact inefficient policies in a confidence game to attract mobile capital. Similarly, Bartolini and Drazen (1997) explored capital account liberalization as a signal of future policy choices.

Even in recent years, the debate over the benefits of financial globalization continues among academics and policy makers. Balcilar et al. (2019) and Asongu and Lieven (2015) present opposing views on its potential economic advantages. Wei (2018) argues that capital account liberalization in developing nations may fail to meet expectations due to inefficiencies in domestic labor, financial, and capital markets. These negative effects are especially pronounced in countries with weak institutions and poor policy frameworks (Gulcemal, 2021). Furthermore, Erauskina and Turnovsky (2019) note that the benefits of lower borrowing costs can be unevenly distributed within a country, further complicating the outcomes of financial globalization.

The remainder of the paper is organized as follows. Section 2 introduces the model, Section 3 provides the analysis, Section 4 presents empirical evidence, and Section 5 discusses policy implications and concludes.

2. Description of the model

Before detailing the model, we outline the key features of our framework.

(i) *Symbiotic Relationship:* There is a mutually beneficial relationship between the government and foreign investors. The government supplies a public good, such as an infrastructure project, that increases returns on foreign investment in the export sector. In turn, foreign capital, by utilizing domestic resources, increases national welfare.

(ii) *Roles of Policymaker and Bureaucrat:* We distinguish between the policymaker, who represents the government, and the bureaucrat-manager, who oversees the implementation of the project (whether in the public or banking sector). The level of bureaucratic effort stochastically determines the quality of the project, which in turn affects the returns on foreign investment in the export sector.

(iii) *Small Open Economy:* We consider a small open economy where the export sector produces a good sold on the world market. Our model captures the resilience of the economy to global shocks that are not related to the quality of the project by focusing on the volatility of export sector earnings. For example, an economy specializing in mining or primary products may be vulnerable to global price fluctuations, whereas a more diversified economy would experience smaller impacts from such volatility. Therefore, we assume that countries with strong fundamentals have well-diversified export sectors and are less sensitive to global shocks. This interpretation simplifies the exposition of our formal model.

(iv) *Foreign Investment Dynamics:* A representative foreign investor provides capital for a private project in the export sector of the host country, which requires two stages to complete. In the second stage, the investor must decide whether to withdraw or roll over the initial investment based on the observed quality of the project. The expected return on investment depends on both the quality of the project and the external shocks. Globalization reduces the cost for foreign investors to withdraw capital during the rollover stage.

Governance: The Government and the Bureaucrat

The government, acting as a policymaker, seeks to maximize the return to domestic factors by attracting foreign investment in the export sector. This foreign investment, which uses domestic resources, increases national income.[7] The government can initiate a public infrastructure project that influences returns on foreign investment. The project can vary in quality, high or low. For now, we assume no initial start-up cost.

The government delegates the project implementation to a bureaucrat, whose effort determines the impact of the project on foreign investment returns.[8] The bureaucrat's choice of effort is unobservable to the government and can be high (e_H) or low (e_L), that is, $e \in \{e_L, e_H\}$. Higher effort incurs a cost, with the cost of low effort $\psi(e_L) = 0$ and the cost of high effort $\psi(e_H) = \Psi > 0$.

[6] In a related context, Beck et al. (2021) examine the relationship between globalization, efficiency, and inequality.

[7] For simplicity, we exclude the possibility of outright expropriation to avoid complicating the analysis with sovereign debt issues. These issues are well understood, and outright expropriation is rare. In our model, a negative realization of the public good functions as an implicit tax or expropriation.

[8] A low productivity outcome of the public good is equivalent to a cost overrun, where the resulting deficit leads to a higher marginal tax on foreign investment.

Table 1
Common prior distribution when bureaucratic effort is e_H.

	s_L	s_H
σ_L	$1-p$	$(1-q)p$
σ_H	0	qp

Table 2
Common prior distribution when bureaucratic effort is e_L.

	s_L	s_H
σ_L	p	$(1-q)(1-p)$
σ_H	0	$q(1-p)$

The bureaucrat's choice of effort, $e \in \{e_L, e_H\}$, leads to a project with productivity $s \in \{s_L, s_H\}$, determined by the following probability distribution: if $e = e_L$, the prior distribution over s_L, s_H is $\{p, 1-p\}$, whereas if $e = e_H$, the distribution is $\{1-p, p\}$, where $p > \frac{1}{2}$ and $s_H > s_L$.

In this framework, project productivity s serves as an informative signal of bureaucratic effort. As p approaches one, the link between bureaucratic effort and project productivity strengthens.

There are two cases to consider:

(A) *Contractible Bureaucrat Effort*: The government can commit to a wage schedule in which the wages depend on the productivity of the project $s \in \{s_L, s_H\}$, and a bonus that is paid if and only if the project is completed. If the project cannot be completed due to capital flight, the bonus will not be paid. The wage contract offered to the bureaucrat is $\{w_L, w_H, B\}$, where w_k is the wage conditional on the productivity of the project $s_k, k = L, H$, and B is the bonus, paid if and only if the project is completed. Due to a limited liability constraint, the government cannot fine the bureaucrat, so $w_L, w_H, B \geq 0$. The bureaucrat's utility function is thus $U_B = B + w_s - \psi(e)$, where $B \geq 0$ if and only if the project is completed, and $\psi(e)$ reflects the cost of effort.

(B) *Non-Contractible Bureaucrat Effort*: The government cannot link wages to project productivity $s \in \{s_L, s_H\}$. It cannot enforce a contingent wage contract, preventing it from paying lower wages when productivity is low. In this case, the wage contract offered to the bureaucrat is $\{w, B\}$, where the bonus B is paid if and only if the project is completed. As in the previous case, $w, B \geq 0$. The bureaucrat's utility function is $U_B = B + w - \psi(e)$, where w is the wage, $B \geq 0$ if and only if the project is completed, and $\psi(e)$ is the cost of effort. This case represents a setting in which bureaucratic effort is non-contractible.

In both cases, if $B = 0$, the threat of capital flight has no impact on bureaucratic effort. Only when $B > 0$ does the threat of capital flight affect the bureaucrat's behavior, as their payoff depends on the project's completion, which in turn depends on whether the initial investment is rolled over by the representative creditor.

Thus, the government's welfare is determined by total output, net of project completion costs: $V = \alpha Y - W - B$, where Y is the additional revenue generated by foreign investment, α is the government's share of that revenue, W is the expected wage paid to the bureaucrat, and B is the bonus paid if the project is completed. If the project is not completed, the government payoff is $-W$.

Investment, Capital Flight and Globalization:

Investment occurs in a single public firm in the export sector, requiring an initial capital investment (normalized to one unit) that must last two periods before generating output and returns. Output depends on both the initial investment and project productivity. A group of identical risk-neutral investors has already invested in the project, with decision-making delegated to an individual maximizing aggregate profits on behalf of the group.[9]

Although the investment spans two periods, investors receive interim information about the project's quality, which shapes their beliefs about future revenue. After the bureaucrat's effort is chosen, an external shock, unrelated to bureaucrat's effort, affects export revenue.

Investors observe a private signal $\sigma \in \{\sigma_L, \sigma_H\}$ regarding project productivity. If productivity is low ($s = s_L$), the representative investor observes σ_L with probability 1. If productivity is high ($s = s_H$), the distribution over σ_L, σ_H is $\{1-q, q\}$, where $0 < q < 1$. These distributions are common knowledge.

Table 1 outlines the common prior distribution for $\{s_L, s_H\} \times \{\sigma_L, \sigma_H\}$ when the bureaucrat effort is e_H.

Table 2 sets out the common prior distribution on $\{s_L, s_H\} \times \{\sigma_l, \sigma_H\}$ when the bureaucratic effort is e_L.

We assume that the government cannot observe the signal σ, which prevents the government from conditioning bureaucrat wages on this information.

The interpretation is as follows: If the public sector project has low productivity, it will also have low profitability for the representative investor. However, if the project has high productivity, its profitability can still be either high or low because of factors beyond the bureaucrat's control. When q is close to one, these external factors have little impact on the profitability of a high-productivity project. In contrast, when q is close to zero, these external factors significantly reduce the profitability of a high-productivity project. Thus, when q is close to one, bureaucratic effort is the dominant determinant of returns, whereas when

[9] Our assumptions imply coordinated withdrawal decisions among investors. We abstract from issues of coordination failure to focus on a distinct, complementary rationale for imposing capital controls.

q is close to zero, external factors dominate.

If the investment is liquidated early, it will be withdrawn from the country, yielding a (normalized) return of 1 per unit of capital initially invested. In such cases, if the investment is terminated early (i.e. after one period) and the capital is moved abroad, the aggregate group payment is $r(1-c_w)$, where $r \geq 0$ and $c_w \geq 0$. Here, c_w represents the additional cost of moving capital across borders when terminating the project early, effectively capturing the cost of short-term capital flows. The parameter r is the per-unit return of withdrawing the project early and investing elsewhere.

Let $E_\sigma Y$ denote the expected value of the project output, conditional on the signal σ, where $\sigma \in \{\sigma_L, \sigma_H\}$. Conditional on the effort of the bureaucrat, there is a common prior distribution on $E_{\sigma_L} Y$ and $E_{\sigma_H} Y$. If the bureaucratic effort is e_L, the prior is $\{1-(1-p)q, (1-p)q\}$, while if the bureaucratic effort is e_H, the prior is $\{1-pq, pq\}$.

Throughout this paper, we assume that $(1-\alpha)E_{\sigma_H} Y > r$ and $E_{\sigma_L} Y = 0$. This assumption rules out the possibility of capital flight never occurring or always occurring, as in $r(1-c_w) \geq 0 = E_{\sigma_L} Y$. Under this condition, we focus on cases where capital flight occurs with a strictly positive probability less than one.

Timing of Decisions:

Suppose that the bureaucratic effort is contractible. The sequence of decisions unfolds as follows:

1. The government sets up the public infrastructure project and offers the bureaucrat a wage contract $\{w_L, w_H, B\}$. At this stage, the government either observes the value of c_w (if it is a parameter) or chooses c_w (if interpreted as a policy variable, such as in the case of capital controls). The foreign investor group commits to investing one unit of capital in the export sector project, which takes two periods to mature.
2. The bureaucrat then chooses an effort level e, which is unobservable to the government and stochastically determines the productivity of the public project.
3. Conditional on productivity s, wages (but not bonus B) are paid to the bureaucrat according to the wage contract.
4. Investors observe the signal σ, form expectations about the overall returns of the export sector project Y, and the representative investor decides whether to withdraw or retain the investment in the country.
5. If the project is completed, the productivity of the public infrastructure is realized, determining the bureaucrat's bonus B, the export revenue, and the returns on investment for foreign investors.

When bureaucratic effort is non-contractible, the only change in Step 1 is that the government offers the bureaucrat a simplified wage contract w, B.

In both cases—contractible and non-contractible bureaucratic effort—we solve the sequential move game using the concept of Perfect Bayesian Equilibrium (PBE).

Interpretation of c_w:

Given sufficient time, capital is always movable across borders, regardless of whether there are explicit restrictions on capital flows. However, what sets the nature of capital flows in recent decades apart is the significant reduction in barriers to cross-border capital movement, particularly in the short term. This reduction has led to globalization of capital and increased the risk of sudden capital flight. Thus, we focus on globalization driven by a reduction in the short-term costs of moving capital across borders. These reductions, denoted by c_w, may be due to technological advancements or policy changes. For example, a reduction in capital controls directly reduces barriers to the short-term mobility of capital. Given our focus on the impact of capital flight on investment discipline, our analysis emphasizes the role of changes in capital controls.

In addition, these changes in capital controls can interact with technological or institutional factors that also influence the cost of short-term capital movements. Such factors include financial integration with the global economy, the availability of information, the level of economic development, the geographical proximity to the major financial centers, and more. For simplicity, we often interpret an increase in globalization as a reduction in c_w resulting from technological advances. However, we also explicitly account for the role of capital controls by treating c_w as a policy variable chosen by the government. The government's commitment to this policy is crucial, as it cannot renege on it without incurring additional costs. Importantly, neither formulation changes the qualitative results we emphasize.

3. Governance and capital flight

In this section, we solve the model to characterize the link between bureaucratic effort and capital flight in different scenarios. First, we analyze cases where the bureaucrat effort is contractible or non-contractible, focusing on the critical role played by the representative creditor's decision to roll over the initial investment. We then examine the case in which the threat of capital flight is removed as an option.

3.1. Capital flight

We begin by outlining the conditions under which the representative investor decides whether to keep capital in the country or withdraw it. In our model, the representative investor cannot credibly commit to retaining capital within the country. If the economic environment deteriorates, the investor will withdraw the investment, leading to capital flight. Whether capital flight occurs depends on whether the productivity of the investment project meets a certain threshold. We derive this threshold such that capital flight occurs if productivity falls below it.

The representative investor will withdraw capital if and only if the continuation value of capital flight, $r(1-c_w)$, exceeds the expected continuation value of the retention of the investment, $(1-\alpha)E_\sigma Y$. Formally, the following inequality must hold:

$$(1-\alpha)\,E_\sigma Y \geq r\left(1-c_w\right) \Longleftrightarrow \frac{E_\sigma Y}{r} \geq \frac{\left(1-c_w\right)}{1-\alpha} = \overline{Y}$$

The initial unit of investment will remain in the country if, and only if, the ratio of the expected revenue from the export project to the return from withdrawing the investment and reinvesting it elsewhere exceeds a threshold value, $\overline{Y} = \frac{(1-c_w)}{1-\alpha}$. We refer to this as the investor's *capital flight threshold*.

In particular, the capital flight threshold decreases as the cost of withdrawing capital, c_w, increases and increases as the investor's share of export revenue, $1-\alpha$, increases. In other words, the higher the short-term cost of capital withdrawal (c_w), the more likely foreign investors are to roll over their investment and keep it in the country. It is important to observe that changes in c_w and α have opposite effects on the value of $\overline{Y}$. For simplicity, the discussion below will focus on how changes in c_w affect bureaucratic incentives, leaving the opposite implications of changes in α to the reader to infer.

When $c_w \geq 1$, the representative investor will never withdraw his investment, effectively making the threat of capital flight irrelevant. In contrast, when the cost of capital withdrawal is very low (ie, c_w is close to zero), capital flight will occur with certainty.

Another possibility arises if the ratio $\frac{E_\sigma Y}{r}$ changes for a fixed capital flight threshold $\overline{Y}$. This can happen for two reasons: first, if expectations about income from the project change and second, if the return on withdrawing the investment and reinvesting elsewhere changes. The latter scenario is especially relevant when interest rate changes in countries such as the United States lead to capital outflows from emerging markets.

Given our assumptions, note that $E_{\sigma_L} Y \leq \overline{Y}$ and $E_{\sigma_H} Y \geq \frac{r}{1-\alpha}$. It follows that $E_{\sigma_L} Y \leq \overline{Y} \leq E_{\sigma_H} Y$, indicating that capital flight occurs with a positive probability.

3.2. Contractible bureaucrat effort

We now examine the wage contract offered by the government to the bureaucrat and the choice of bureaucrat effort.

If the government decides not to incentivize high effort from the bureaucrat, it will optimally set $w_H = w_L = B = 0$, resulting in the bureaucrat choosing low effort $e = e_L$.

However, if the government wants to induce high effort, it must offer a wage contract $\{w_L, w_H, B\}$ that satisfies the incentive constraints of the bureaucrat, the participation limitation, and the limited liability limitation, while minimizing its costs. This is equivalent to choosing a contract that maximizes the government's ex ante payoff which is additively separable in benefit (its share of the expected revenue) and cost (the cost of inducing high effort), which enters negatively in the government's payoff.

The government chooses the wage contract to solve the following optimization problem:

$$\begin{aligned}
&\min_{\{w_L, w_H, B\}} pw_H + (1-p)w_L + pB \text{ s.t.}\\
&pw_H + (1-p)w_L + pqB - \Psi \geq (1-p)w_H + pw_L + (1-p)qB, \ (IC)\\
&pw_H + (1-p)w_L + pqB - \Psi \geq 0, \ (P)\\
&w_H, w_L, B \geq 0.
\end{aligned}$$

The first constraint (labeled (IC)) is the incentive compatibility constraint and the second constraint (labeled (P)) is the participation constraint.

Let $E_H Y$ and $E_L Y$ denote the expected output when the government offers a wage contract that induces high and low effort, respectively.

The following proposition characterizes the optimal wage contract and bureaucrat effort when such effort is contractible:

Proposition 1. *In the PBE, if $E_H Y > \frac{\Psi}{\alpha(2p-1)}$, the government will choose to induce high bureaucratic effort and at any optimal wage contract, $w_L = B = 0$ and $w_H = \frac{\Psi}{2p-1}$. The ex ante payoff to the government increases in $c_w \geq 0$.*

Proof. See Appendix A. ■

Note that, as $B = 0$, the bureaucrat's pay-off depends on the wages paid conditional on the signal $s \in s_L, s_H$ before the representative investor decides whether to cancel the investment. In this scenario, the threat of capital flight does not influence bureaucratic efforts or wages.

When effort is contractible, the threat of capital flight has no direct impact on governance quality, as reflected by bureaucratic incentives. The government can induce high effort by ensuring that wages depend on the productivity of the project. However, if the cost of capital withdrawal (c_w) is high, the government becomes less vulnerable to the consequences of low project returns, even when a high level of effort is exerted. As c_w increases, the government's expected payoff also rises.

However, a higher cost of capital withdrawal diminishes the value of the foreign investor's option to invest. Since the investor cannot commit to rolling over the initial investment, if c_w is too low, the investor can forgo the opportunity to obtain $(1-\alpha)E_{\sigma_H} Y$ when the project output is high. In contrast, if c_w is too high, the investor might miss out on the opportunity to gain $r(1-c_w) > 0$ when the project output is low. Thus, a higher ex-ante cost of capital withdrawal negatively affects the representative investor's expected return from investing in the project.

Once capital is invested, higher capital controls benefit the host country's policy maker. By limiting the investor's ability to withdraw capital, the government can induce high bureaucratic effort and capture the resulting benefits. This creates a distributional effect, favoring the policymaker-government at the expense of foreign investors.

3.3. Non-contractible bureaucrat effort

We now consider the case where governance is imperfect and bureaucrat effort is only partially contractible.

Note that the analysis of capital flight remains unchanged from the preceding section and is not repeated here.

If the government chooses not to incentivize high effort, it will set $w_H = w_L = B = 0$, resulting in the bureaucrat choosing low effort, $e = e_L$.

If the government aims to induce high effort, it must offer a wage contract $\{w, B\}$ that meets the incentives, participation, and limited liability constraints of the bureaucrat at a minimum cost. The optimal contract maximizes the government's payoff, which is separable into benefits (its share of expected revenue) and costs (the cost of inducing high effort and any start-up costs).

The government chooses the wage contract to solve the following:

$$\begin{aligned} &\min_{\{w_L, w_H, B\}} w + pB \quad \text{s.t.} \\ &w + pqB - \Psi \geq w + (1-p)qB, \ (IC') \\ &w + pqB - \Psi \geq 0, \ (P') \\ &\qquad w, B \geq 0. \end{aligned}$$

The following proposition characterizes the optimal wage contract and bureaucrat effort when effort is non-contractible:

Proposition 2. *In the PBE, if $E_H Y \geq \frac{\Psi}{\alpha q(2p-1)}$, the government will induce high bureaucratic effort with the wage contract $B = \frac{\Psi}{q(2p-1)}$ and $w = 0$. There exists a value $\overline{c}w \in (0,1)$ such that $cw = \overline{c}w$ maximizes the government's ex ante payoffs with $\overline{c}_w$ decreasing in q and as $q \to 0$, $\overline{c}_w \to 1$.*

Proof. See Appendix A. ■

When bureaucratic effort is non-contractible, the threat of capital flight becomes a key mechanism for inducing high effort. The bureaucrat's payoff is now contingent on the representative investor's decision to roll over their investment, which is influenced by government policies.

In the proof of this proposition, it is shown that $E_H Y$ increases with c_w up to $\overline{c}_w$, after which it declines. Thus, the government has no incentive to increase the cost of capital withdrawal beyond $\overline{c}w$. In this non-contractible effort scenario, the threat of capital flight introduces a "discipline effect", pressing the bureaucrat to exert high effort. When governance is weak because the policymaker cannot credibly threaten the bureaucrat, low effort becomes the default. The bureaucrat knows that the policy maker's threat not to complete the project is empty. However, the threat of capital flight helps mitigate this inefficiency.

However, there is an important caveat: for capital flight to serve as an effective disciplinary device, public good productivity, and export revenue changes must be tied to bureaucratic effort, not external factors beyond the bureaucrat's control. Specifically, in the proof of Proposition 2, we show that as $q \to 0$, $\overline{c}_w \to 1$. When external factors, rather than bureaucratic effort, drive project profitability, the policymaker will aim to prevent capital flight with certainty. In such cases, the threat of capital flight may undermine the bureaucrat's incentives. Notably, the bureaucrat's bonus $B = \frac{\Psi}{q(2p-1)}$ decreases with q, meaning the bonus is larger when q is lower. For capital flight to effectively incentivize effort, it must be triggered by low bureaucratic effort. If capital flight is instead caused by factors outside the bureaucrat's control, it results in over-discipline and worsening governance.

As mentioned above, a higher cost of capital withdrawal reduces the value of the foreign investor's option to invest in the country.

Although our analysis offers arguments for both critics and advocates of easing international capital mobility, we urge caution in interpreting these results and recommend against viewing them as direct policy prescriptions.

3.4. Removing the threat of capital flight

We now analyze the case where the threat of capital flight can be eliminated. This may occur if the representative creditor can commit not to withdraw capital (e.g., in the case of the IMF or an official bilateral creditor), or if the government issues a debt contract that does not require the rollover of the initial investment.

In this scenario, we must examine not only the determinants of bureaucratic effort but also the ex-ante decisions of both the government and the representative creditor. Specifically, we need to consider whether the government initiates the project and whether the representative creditor chooses to invest in the project at the outset. Hence, we relax the assumption that the government incurs no start-up cost for the project. Instead, we assume an initial start-up cost of $C > 0$. Furthermore, we assume that the representative investor incurs a per-unit cost of $R > r$ when raising the initial capital investment for the project.

The following proposition characterizes both the determinants of bureaucratic effort and the ex-ante decisions of the government and the representative creditor:

Proposition 3. *Assume there is no threat of capital flight, that is, $c_w = 1$. At the PBE: (a) When bureaucratic effort is contractible, if $E_{\sigma_H} Y > \frac{\psi}{\alpha(2p-1)}$, the government will choose to induce high bureaucratic effort, and there exists a non-null set of values $R > r$ and $C > 0$ for which the government will initiate the project and the representative creditor will participate; (b) When bureaucratic effort is non-contractible, the bureaucrat will always choose low effort. In this case, whenever $r < R$ and $C > 0$, the government will not initiate the project, nor will the representative creditor participate.*

Proof. See Appendix A. ■

This result shows that in the absence of a threat of capital flight, a necessary condition for the project to be initiated is that the bureaucratic effort must be contractible. When it is, the government will induce high effort, and there exists a non-null set of parameters for which the government will initiate the project, and the representative creditor will invest. However, when bureaucratic effort is non-contractible, the government cannot induce high effort. As a result, the project will not be started due to the positive start-up cost $C > 0$, and the representative creditor will not invest given $r < R$.

When the representative creditor is the IMF or an official external lender, project lending can be made conditional on the contractibility of bureaucratic effort. This would require enhancing the state capacity of the borrowing country to ensure that bureaucratic wages are related to effort.

4. Globalization and governance: Some evidence

Our theoretical framework generates a rich set of predictions. In this section, we provide evidence that is consistent with several of these predictions. However, we emphasize that this evidence is suggestive and should be interpreted with caution, as we elaborate later. Below is a summary of some key predictions:

A. Perceived Adversity of the External Environment and Governance:

The quality of governance deteriorates when the external economic environment is perceived to be more adverse. This occurs because, under greater perceived adversity, the probability of capital flight becomes less sensitive to changes in bureaucratic effort, leading to a clear decline in governance quality.

B. Governance and Globalization (Capital Controls): A reduction in the cost of financial globalization, such as through lower capital controls (c_w), should be associated with improvements in governance measures. Globalization can lead to better governance in some countries and worse governance in others. However, governments are only likely to relax capital controls when doing so has a positive impact on governance.

In what follows, while we provide evidence for both sets of predictions, our focus is on prediction A. This focus is for two reasons. First, we lack plausible measures for changes in the cost of capital movement between countries c_w. The only available measure is the size of capital controls, which is an endogenous policy variable chosen by the government. Second, and more importantly, focusing on prediction A sheds light on the key mechanism emphasized in this paper, how an exogenous change in economic uncertainty, potentially driven by globalization, can worsen incentives for good governance.

Any empirical design aiming to study this issue faces several challenges. First, we need to identify a sudden and unexpected event that increases uncertainty in the economic environment for a large number of countries. Second, this change in the economic environment must be independent of the actions of the bureaucrat in the country studied.

We argue that the 1994 Mexican currency crisis provides a possible natural experiment for studying the impact of increased external adversity on governance quality. This crisis heightened adversity and triggered fears of contagion in countries perceived as "similar" to Mexico—a phenomenon known as the "Tequila effect" on other countries in the region (see Dornbusch et al., 2000).[10]

It is important to distinguish between subjective contagion and real economic contagion in these countries. According to our theory, we expect that greater uncertainty (driven by external shocks) will impact governance under two conditions. First, the increased perceived adversity may be partly due to subjective (rather than real economic) contagion. Second, increased perceived adversity should only affect governance if the country already has low state capacity.

4.1. Data

As the first step in our empirical analysis, we need a measure of a country's bureaucratic performance. We rely on survey data on 'bureaucratic quality from Political Risk Services (PRS) for a large number of countries from 1984 to 1997. The index of bureaucratic quality ranges from 0.2 to 6 and is increasing in quality. The index is one of several variables produced by PRS, which aggregates political, financial, and economic information into risk points for each component based on a consistent evaluation method (https://epub.prsgroup.com/available-data).

Second, we need an exogenous measure of the perceived similarity of a country to Mexico. To this end, we use the weighted genetic closeness of a country to Mexico as a proxy for expected contagion (Spalaore and Wacziarg, 2009). The measure ranges from 14 to 1835 in our data. It is based on the genetic concept of F_{ST} distance, which measures genetic differences between populations based on heterozygosity, the probability that two alleles selected at random from two populations are different (Spalaore and

[10] Glick and Rose (1999) noted that following the Mexican crisis, there was significant uncertainty, with speculative attacks occurring immediately on other Latin American countries. The most prominent targets of the "Tequila Hangover" were Argentina, Brazil, Peru, and Venezuela. For a summary of the effects of the Mexican crisis and its aftermath, see Sachs et al. (1996) and Kaminsky and Reinhart (2000).

Wacziarg, 2009). Countries perceived as similar to Mexico are more likely to experience contagion in financial markets, increasing volatility, and making investment decisions less responsive to bureaucratic effort.

Third, we measure the state capacity of a country using institutional strength. For this, we use the Protection Against Expropriation index, which measures institutional differences arising from various policy types. To facilitate interpretation, we reverse the index so that 10 represents the poorest institutions and 0 represents the best. We instrument for this variable using settler mortality (Acemoglu et al., 2001). This instrument captures mortality rates among soldiers, bishops, and sailors in colonies between the seventeenth and nineteenth centuries. The underlying idea is that high settler mortality discouraged colonization, leading to the establishment of extractive rather than inclusive institutions.[11] Summary statistics for these variables are given in Table 4.

4.2. Empirical specification

According to our theoretical framework, increased uncertainty in the economic environment should worsen bureaucratic performance, particularly in the presence of incomplete contractual structures between the government and the bureaucrat (i.e. low state capacity). Since the uncertainty triggered by the Mexican crisis is likely to affect countries perceived as similar to Mexico, our empirical specification takes the following form.[12]

$$e^*_{ct} = \alpha_c + \beta_1 Contagion_{ct} \times SettlerMortality_c + \beta_2 SettlerMortality_c \times Post94_t + \beta_3 Contagion_{ct} + \beta_4 Post94_t + \Gamma YearFE + \Xi Controls + \epsilon_{ct}$$

In this equation, the subscript c denotes countries, and t denotes years. The model omits standard time-invariant variables because we estimate a fixed-effects model.[13] As a result, variables such as country institutions (measured by settler mortality), genetic closeness to Mexico, and their interactions are dropped in the fixed-effects specification. The variable $Post94$ is a dummy for the period 1995–1997. $Contagion$ equals the interaction between genetic closeness to Mexico and $Post94$. In our model, the impact of uncertainty on governance is absent for countries without an incomplete contractual problem between the policymaker and the bureaucrat. Thus, in some specifications, we increase flexibility by allowing countries with perfect state capacity[14] to react differently by interacting our treatment with a dummy for perfect state capacity. If this feature of our model is correct, this refinement should enhance the precision of our estimates.

The reduced-form equation includes several controls: GDP per capita, military regimes, democracy, population, trade with Mexico, and trade openness. Our results are robust to the inclusion or exclusion of these controls, although our preferred specifications exclude GDP per capita, exports, debt, trade with Mexico, and trade openness due to endogeneity concerns. However, we ensure that our findings are not driven by economic fundamentals by testing their robustness with variables like imports and exports with Mexico, which capture exposure to the real economic effects of the crisis.

The core assumption underlying our specification is that the initial trigger for the Mexican crisis was not the result of actions by policymakers or bureaucrats in countries perceived to be similar to Mexico, except for Mexico itself.[15] For example, debt service is a strong indicator of liquidity crises. The empirical implication is that countries experiencing a liquidity crisis could be endogenous, which would undermine reduced-form estimates. To address this, we use genetic similarity to Mexico as an exogenous measure of perceived similarity, thereby avoiding this issue of endogeneity.

For these reasons, we focus on the impact of increased external adversity in countries other than Mexico, which is excluded from the analysis. Our main hypothesis is that countries perceived to be similar to Mexico and characterized by low state capacity were more likely to be negatively affected by the uncertainty triggered by the Mexican currency crisis.

Nevertheless, we must consider the possibility that the crisis was influenced by bureaucratic actions throughout the region, which could violate this assumption. Specifically, there must be no preexisting negative trends in bureaucratic quality between countries similar to Mexico that contributed to the crisis and persisted afterward. If such trends existed, the regression could not be interpreted as capturing the causal effect of the crisis on bureaucratic quality.

In Fig. 1, we examine whether this is the case. The figure plots bureaucratic quality on the y-axis for the years leading up to the 1994 crisis (x-axis). Countries similar to Mexico are shown in blue, and those not similar are shown in red (split by the median value of the data). We find no evidence of differential trends; in fact, the trends go in the opposite direction of what might be concerning. The bureaucratic quality in countries perceived as similar to Mexico was rising, not falling, relative to other countries in the run-up to the crisis. This finding strengthens the validity of our identification strategy, allowing us to proceed with analyzing the resulting estimates.

[11] Acemoglu, Johnson, and Robinson show that settler mortality correlates highly with the Risk of Appropriation, so our first-stage analysis should align in this regard. However, our difference-in-differences design requires accounting for two endogenous variables. We also reconsider the exclusion restriction assumption, but we see no reason for settler mortality to affect bureaucratic quality, except through its influence on institutions.

[12] This can be seen as a triple-difference design.

[13] The year fixed effects are crucial to account for bureaucrat turnover. Implicitly our assumption is that changes to bureaucrat quality the comes via the composition of the bureaucracy can only take place over the long run. Given the year fixed effects, the empirical approach abstracts from these long-run comparisons, leaving only bureaucratic effort as an input to quality, in line with the theoretical model.

[14] The state capacity index used to construct this binary variable is the sum of the PRS corruption, rule of law, and bureaucracy indices.

[15] Whether this fear of contagion (the Tequila effect) was driven by fundamentals or by irrational investor perceptions is less important.

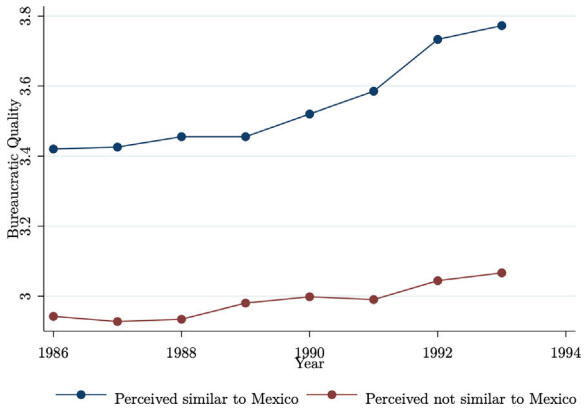

Fig. 1. Trends in bureaucratic quality leading up to the Mexican Peso crisis. (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article.)

Table 3
Reduced-form estimates of contagion on bureaucratic quality.

	Dependant variable: Bureaucratic quality					
	(1)	(2)	(3)	(4)	(5)	(6)
Contagion × Settler mortality	−0.144*	−0.597***	−0.622***	−0.627***	−0.537***	−0.557***
	(0.0815)	(0.129)	(0.126)	(0.124)	(0.140)	(0.147)
Year FE	Y	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y	Y
Non-interacted treatments	N	Y	Y	Y	Y	Y
Diff. reaction if high st.cap.	N	Y	Y	Y	Y	Y
Military regimes	N	N	Y	Y	Y	Y
Democracy	N	N	N	Y	Y	Y
GDP per capita	N	N	N	N	Y	Y
External Debt	N	N	N	N	Y	Y
Exports	N	N	N	N	Y	Y
Openness to trade	N	N	N	N	N	Y
Interdependence with Mexico	N	N	N	N	N	Y
Observations	616	616	616	616	528	528
R-squared	0.074	0.106	0.156	0.175	0.225	0.243
Number of countries	56	56	56	56	49	49

Notes: All models are estimated using OLS. The time period included in the sample is restricted to 1987–1998. The dependent variable in all columns is Bureaucratic Quality. All models include country fixed effects and year fixed effects. Contagion × Settler Mortality refers to the interaction between Post94, Settler Mortality and Closeness to Mexico. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

4.3. Results

Table 3 presents the main results from the reduced-form specification. The coefficient of interest is β_1, which corresponds to the interaction between settler mortality and the contagion variable (equal to the genetic distance in post-crisis observations). Across all specifications, we find a consistently negative coefficient, which remains robust to a wide variety of controls. This aligns with our theoretical prediction that bureaucratic performance deteriorates in response to an increased threat of capital flight, particularly when the country initially has low bureaucratic state capacity and is perceived to be similar to Mexico.

Furthermore, we expect countries with perfect bureaucratic state capacity to respond differently to the crisis. Our empirical results confirm this expectation: when we allow these countries to react differently (columns 2–6), the precision of our estimates improves significantly. Furthermore, we can rule out the possibility that our results are driven by economic fundamentals. The estimates remain robust when we include variables that control for exposure to the crisis based on economic fundamentals, such as GDP per capita, trade openness, external debt, imports and exports with Mexico, and total exports (see columns 5–6).[16]

We conduct further robustness checks. One concern with this framework is the possibility that we are capturing normal trend effects rather than the specific impact of the crisis. In other words, this can be seen as a differences-in-differences design, which depends on the assumption that the treatment and control groups do not already diverge in outcomes before treatment. To address this concern, we run a series of placebo tests by shifting the year of treatment to various points in time. As shown in Table 8, this

[16] We also report two-stage least squares results in Table 2, Appendix B for details.

is not an issue, as each placebo estimate is close to zero and statistically insignificant.[17]

Despite the robustness of our findings, caution is still warranted. One concern is the potential for the Mexican crisis to generate real economic contagion effects, which may negatively impact neighboring countries' economic fundamentals, thereby reducing the resources available for bureaucracy. For example, the crisis could have caused a sharp drop in Mexican demand for imports or a reduction in Foreign Direct Investment (FDI) flows to other Latin American countries.[18] This economic contagion could adversely affect the budgetary situation of these countries, limiting resources for bureaucracy and governance. Failure to control for changes in economic fundamentals due to the crisis could introduce omitted variable bias, distorting our estimates. We therefore adopt a two-pronged approach.

First, we conduct a falsification test by examining whether the crisis reduced government budgets. Fortunately, the crisis had no significant impact on the budgets of countries similar to Mexico with low state capacity. The results are reported in Table 9, columns 5–8. Not only is the estimate insignificant, but the sign is also opposite to what would be expected if budget constraints were driving the effect. This finding supports the interpretation that changes in bureaucratic quality are not driven by direct economic exposure to the crisis.

Second, we address concerns about the subjectivity of the bureaucratic performance measure. While this measure is widely used, it may be vulnerable to "contamination", as it relies on the perceptions of managers and investors. Given the absence of reliable, objective alternative measures of bureaucratic performance for a wide variety of countries, a potential concern is that no real change in bureaucratic quality occurred and that the crisis merely altered perceptions.

To assess the significance of this concern, we run a falsification test using a corruption variable from the same survey as the bureaucratic quality measure. The idea is that while we expect no real change in corruption, perceptions of both bureaucratic quality and corruption should be correlated. Any change in the corruption measure can then be attributed to perception bias. If perception bias affects our bureaucratic quality results, we should see similar changes in corruption. The results of this test, shown in Table 9, columns 1–4, indicate that corruption estimates are close to zero and insignificant, suggesting that perception bias is not driving our findings on bureaucratic quality.[19]

Our findings suggest that the increase in uncertainty in financial markets, triggered by the Mexican crisis, exacerbated the threat of capital flight and negatively impacted governance—especially in countries with weak institutional state capacity. These effects are robust to a wide range of controls, including measures of economic development, and pass the placebo analysis.[20]

We also provide some suggestive evidence on the relationship between governance and capital controls, as outlined in prediction B. Globalization of capital can occur due to policy changes (e.g., reducing capital controls) or technological advances (e.g., the information technology revolution). Both factors have contributed to the increase in international capital flows over the past two decades. However, empirical research on financial globalization and governance faces challenges due to the lack of an exogenous measure of technology-related capital mobility costs and the endogeneity of capital control policy changes. Therefore, our analysis remains modest, offering suggestive evidence rather than definitive conclusions, as concerns about endogeneity and selection bias persist.

We start by noting the strong correlation between state capacity and capital controls (Table 11, columns 1–3), where countries with higher state capacity tend to have more relaxed capital controls. Columns 4 and 5 of Table 11 show conditional correlations, suggesting that relaxation of capital controls is associated with improvements in governance, captured by bureaucratic quality. However, this correlation may be driven by countries that refrain from relaxing capital controls out of fear of negatively impacting governance. Our theoretical framework suggests that the overall effect of changes in capital controls on governance may be close to zero, as both positive and negative effects are possible. In column 6 of Table 11, we attempt to control for selection bias, which may drive the results in columns 4 and 5. If countries with poor institutional quality are less likely to relax capital controls, the institutional quality variable will correlate with selection bias. As predicted by our theory, controlling for this selection effect reduces the estimate towards zero, consistent with our theoretical predictions, although omitted variables may still be a concern.

5. Policy discussion and conclusion

The debate on the appropriateness of capital controls has been central to discussions about the design of international financial architecture. For much of the past two decades, the IMF's stance has been clear: countries could only reap the benefits of financial globalization by reducing or eliminating capital controls.[21] This view has been echoed by economists like Edwards (1999)

[17] As an additional robustness test, we examine serial correlation following the approach suggested by Bertrand et al. (2004). Table 7 shows the results of the reduced-form and two-stage least squares (2SLS) models using two-way fixed effects for countries and years, along with robust standard errors clustered as proposed by Cameron and Miller (2011). Our results remain robust.

[18] We control for this by including direct controls for trade with Mexico in the main results. We also test for FDI effects through a falsification exercise similar to Table 9, using FDI as the dependent variable. The results in column 4 of Table 10 confirm that there is no decrease in FDI among the treatment group after treatment.

[19] We also ran similar tests using data from the Heritage Foundation, with similar results. Unfortunately, data from Transparency International and the World Bank were not available for the pre-crisis period, preventing us from testing those sources.

[20] We also explore several potential confounding mechanisms in Table 10. In column 1, we test whether a shift towards right-leaning politics led to reduced financial support for bureaucracy, which could degrade its quality. The estimate shows that this is not the case. In column 2, we examine whether the liquidity crisis led to violations of IMF conditions, resulting in reduced IMF support and worsening bureaucracy. Again, this is not supported by the data. In column 3, we investigate federalism as a potential factor, hypothesizing that increased local accountability might improve bureaucracy. The estimate, however, is not significant.

and Dornbusch (1998). In contrast, scholars like Rodrik (1999a,b), Bhagwati (1998), and Eichengreen (1999) have been more sympathetic to the imposition of capital controls. More recently, Bhargava et al. (2023) has taken a more nuanced view, suggesting that capital controls can be a valuable macroprudential tool. The empirical evidence remains mixed, and the lack of consensus is understandable. Both proponents and critics of capital controls make valid arguments, especially when considering a country's vulnerability to external shocks and its institutional capacity.

Our analysis suggests that arguments for capital controls are strongest in countries with low state capacity, where vulnerability to capital flight is heightened by an uncertain and volatile global economic environment. We also present a novel argument for the qualified use (or abolition) of capital controls, namely, how the threat of capital flight can influence governance positively or negatively.

Despite the simplicity of our framework, our results are striking. Globalization, by exacerbating the threat of capital flight, has the potential to "discipline" governments to adopt more efficient policies. However, this disciplinary mechanism is not without drawbacks. The threat of unwarranted capital flight can also harm domestic welfare.

We show that, without the threat of capital flight, a necessary condition for project initiation is that bureaucratic effort must be contractible. When bureaucratic effort is non-contractible, the government has no incentive to initiate the project, and the representative creditor will not invest.

An official creditor, such as the IMF, could commit to rolling over the initial investment, conditional on measures that strengthen domestic institutions by making bureaucratic effort contractible. Strengthening state capacity in this way goes beyond conventional IMF conditionality measures, such as maintaining a primary budget surplus after debt restructuring to ensure that the debtor state is able to service payments to the IMF itself. The limited investment required to build state capacity implies that the borrower state may remain vulnerable to the threat of capital flight as a disciplinary device.

Designing institutional mechanisms that credibly commit governments to behave efficiently is challenging, especially in developing countries with weaker state capacity. However, our analysis cautions against assuming that globalization will spontaneously provide a straightforward solution to discipline governments and improve governance. Although all countries face the risk of undisciplined governments, this issue is particularly severe in developing countries, which lack mechanisms to identify when punishment is needed. As North (1990) argued, the lack of such mechanisms creates an information problem. Although globalization, integration, and technological change might eventually produce such mechanisms, their impact remains uncertain.

Future research could extend our analysis in several directions. One potential avenue would be to model globalization as reducing the cost of capital inflows before investment, rather than focusing exclusively on the costs associated with moving capital out after investment. Another extension could examine the long-term effects of capital flight on economic growth, shifting the focus beyond the short-term impacts explored in this study.

CRediT authorship contribution statement

Arthur Blouin: Writing – review & editing, Writing – original draft, Visualization, Software, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Sayantan Ghosal:** Writing – review & editing, Writing – original draft, Visualization, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Sharun W. Mukand:** Writing – review & editing, Writing – original draft, Visualization, Resources, Methodology, Investigation, Formal analysis, Data curation, Conceptualization.

Appendix A. Theory

Proof of Proposition 1. Note that in any solution, $w_L = 0$. Since B cancels out on both sides of (IC) while B enters positively in (P), neither w_H nor B can be both positive in any solution. Furthermore, at least one of (IC) or (P) must hold with equality. Suppose (IC) holds as an equality. Then, either $B = 0$ and $w_H = \frac{\Psi}{2p-1}$ or $w_H = 0$ and $qB(1-2p)/ \geq \Psi$. The latter case cannot hold as $p > \frac{1}{2}$, so $B = 0$. If (P) holds as an equality, then $B = 0$ and $w_H = \frac{\Psi}{p}$. When $w_H = \frac{\Psi}{2p-1}$, both (IC) and (P) hold. If $w_H = \frac{\Psi}{p}$, (P) holds, but (IC) does not. Therefore, $w_H = \frac{\Psi}{2p-1}$ and $w_L = B = 0$. By calculation:

$$E_H Y = pqE_{\sigma_H} Y,$$

$$E_L Y = (1-p)qE_{\sigma_H} Y$$

When the government offers a wage contract that induces high effort, the ex ante expected return to the government from investing in the project is $\alpha E_H Y - \frac{\Psi}{2p-1}$; with low bureaucratic effort, it is 0. Hence, the government will induce high bureaucratic effort if $E_H Y \geq \frac{\Psi}{\alpha p}$. Note that $\alpha E_H Y - \frac{\Psi}{2p-1}$ increases with c_w. The ex ante payment to the representative investor decreases as c_w

[21] In 1997, the IMF's Interim Committee stated that "the liberalization of capital flows is an essential element of an efficient international monetary system in this age of globalization". This is cited in Rodrik (2011), who provides an insightful discussion of the debate within the IMF and its historical context. Rodrik (1999a,b) also quotes the IMF's World Economic Outlook from October 1998, which criticized Malaysia's imposition of capital controls in 1998, predicting it would harm the country's recovery and development, and potentially affect other emerging market economies.

increases.

At each step of the sequential game, only one agent makes a decision. In steps 2–5, the agent's choice set is finite. In Step 1, the government's optimal choice of the wage contract, the decision to incur the initial cost, and the decision to choose c_w (if it is a choice variable) are derived based on the anticipated choices of other agents. We specify posterior beliefs for the investor in subgames that do not occur along the equilibrium path. If the investor observes $w_H \leq w_L$ and $B = 0$ or $w_H < \frac{\Psi}{p}$, they believe with probability one that the bureaucrat has exerted low effort and will not roll over the project. Under these out-of-equilibrium beliefs, no agent has an incentive to deviate when equilibrium play is characterized by Proposition 1, making it a PBE. ■

Proof of Proposition 2. In any solution, $w = 0$. At least one of (IC') or (P') must hold with equality. Suppose (IC') holds as an equality. Then, $B = \frac{\Psi}{q(2p-1)}$. If (P') holds as an equality, then $B = \frac{\Psi}{qp}$. When $B = \frac{\Psi}{q(2p-1)}$, both (IC') and (P') hold. However, when $B = \frac{\Psi}{qp}$, (P') is true, but (IC') is not. Therefore, $B = \frac{\Psi}{q(2p-1)}$ and $w = 0$.

As in the proof of Proposition 1, $E_H\widetilde{Y} > E_L\widetilde{Y}$ and $\hat{R}H > \hat{R}L$ since $p > \frac{1}{2}$.

When the government offers a wage contract that induces high effort, the ex ante expected return to the government from investing in the project is $E_H\widetilde{Y} - \frac{\Psi}{2p-1}$. With low bureaucratic effort, it is zero. Therefore, the government will induce high bureaucratic effort if $E_H\widetilde{Y} \geq \frac{\Psi}{\alpha q(2p-1)}$. Let $\bar{c}_w$ be the solution to equation $r(1 - cw) = (1 - \alpha)pqE_{\sigma_H}Y$. Note that $\bar{c}_w \in (0, 1)$ decreases with q, reaching one when q approaches zero. By choosing $c_w \geq \bar{c}_w$, the government ensures that capital flight does not occur.

At each step of the sequential game, only one agent makes a choice. In Steps 2–5, the choice set is finite. In Step 1, the government's optimal choices regarding the wage contract, the initial cost, and c_w (when applicable) are explicitly derived while considering the anticipated choices of other agents. Posterior beliefs are specified in subgames that do not occur along the equilibrium path. If the investor observes $B = 0$, they will believe with probability one that the bureaucrat has exerted low effort and will not roll over the project. Under these out-of-equilibrium beliefs, no agent has the incentive to deviate when the equilibrium play is as described in Proposition 2, and it is a PBE. ■

Proof of Proposition 3.

Case 1: Contractible Bureaucrat Effort

In the absence of the threat of capital flight and with contractible bureaucrat effort, the government chooses the wage contract to solve:

$$\min_{\{w_L, w_H, B\}} pw_H + (1-p)w_L + B \text{ s.t.}$$
$$pw_H + (1-p)w_L + B - \Psi \geq (1-p)w_H + pw_L + B, \ (IC_I)$$
$$pw_H + (1-p)w_L + B - \Psi \geq 0, \ (P_I)$$
$$w_H, w_L, B \geq 0.$$

Note that in any solution, $w_L = 0$. Furthermore, since B cancels out on both sides of (IC_I) and B enters positively in (P_I), in any solution $B = 0$. At least one of (IC_I) or (P_I) must hold with equality. Suppose (IC_I) holds with equality. Then $w_H = \frac{\Psi}{2p-1}$. Suppose that (P_I) holds with equality. Then $w_H = \frac{\Psi}{p}$. Using the same logic as in the proof of Proposition 1, the optimal wage contract is $w_H = \frac{\Psi}{2p-1}, w_L = B = 0$. Let $\widetilde{R}H$ (respectively, $\widetilde{R}L$) denote the ex ante payoff to the representative investor when the government can induce a high (respectively, low) bureaucratic effort. Then:

$$\widetilde{R}_H = (1-\alpha)pqE_{\sigma_H}Y,$$
$$\widetilde{R}_L = (1-\alpha)(1-p)qE_{\sigma_H}Y. \quad (1)$$

The expression for E_HY and E_LY remains the same in Proposition 1, Hence, $E_HY > E_LY$ and $\widetilde{R}_H > \widetilde{R}_L$ as $p > \frac{1}{2}$.

When the government offers a wage contract that induces high effort, the ex ante expected return to the government from investing in the project is $\alpha E_HY - C - \frac{\Psi}{p}$; with low bureaucratic effort, it is $-C$. Therefore, the government will choose to induce high bureaucratic effort if and only if $\alpha E_HY \geq \frac{\Psi}{2p-1}$, or equivalently, $E_HY \geq \frac{\Psi}{\alpha(2p-1)}$.

By assumption, $(1-\alpha)E_{\sigma_H}Y > r$. Therefore, there exists values of $C > 0$ and $R > r$ such that both

$$\alpha 2pqE_{\sigma_H}Y \geq C + \frac{\Psi}{2p-1},$$
$$(1-\alpha)(1-p)qE_{\sigma_H}Y \geq R$$

will hold, and for these values, the government will choose to undertake the project, and the representative investor will choose to invest in the project.

Case 2: Non-Contractible Bureaucrat Effort: In this case, since wages cannot be conditioned on project quality and the bonus is always paid, the incentive compatibility constraint for inducing high bureaucratic effort is:

$$w + B - \Psi \geq w + B, \ (IC_I')$$

which can never be satisfied. Hence, the bureaucrat will always choose $e = e_L$. Given this, the participation constraint

$$w + B \geq 0, \quad (P_1')$$

will hold as $w, B \geq 0$. To minimize costs, the government will set $w = B = 0$.

Moreover,

$$E_H \widetilde{Y} = E_L \widetilde{Y},$$

$$\widehat{R}_H = \widehat{R}_L$$

It follows that since $R > 0$ and $C > 0$, neither the government will choose to initiate the project nor the representative investor will choose to participate. ■

Appendix B. Empirics

See Tables 4–11.

Table 4
Summary statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
Institutions	1589	2.69	2.24	0	9.5
Bureaucratic quality	1589	3.299	1.54	0.2	6
Genetic closeness to Mexico	1620	1204	543.2	14.14	1835
Settler mortality	904	4.69	1.21	2.15	7.99
GDP per capita	1695	7147	7079	155	39,873
Population (1000)	1695	40,188	137,022	211	1,255,698
Democratic	1694	0.487	0.499	0	1
Military rule	1686	0.05	0.218	0	1

Table 5
Similar to Mexico based on Spolaore and Wacziarg, 2009.

Rank	Most similar	Most dissimilar
1.	Guatemala	Congo
2.	El Salvador	Uganda
3.	Bolivia	Kenya
4.	Honduras	Zimbabwe
5.	Chile	Tanzania

Table 6
Two-stage least squares estimates of the contagion effect.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: First stage (1) - Dependant variable: Contagion × Poor institutions						
Contagion × Settler mortality	0.454***	0.716***	0.708***	0.709***	0.611***	0.559***
	(0.0951)	(0.153)	(0.152)	(0.152)	(0.156)	(0.157)
Settler mortality × Post94	168.8*	22.73	27.29	16.79	157.7	231.02*
	(95.57)	(115.5)	(115.3)	(115.7)	(124.8)	(128.7)
R-squared	0.611	0.616	0.617	0.618	0.680	0.685
Panel B: First stage (2) - Dependant variable: Post treatment × Poor institutions						
Contagion × Settler mortality	−0.205*	−0.00134	−0.0129	−0.0117	−0.178	−0.214
	(0.105)	(0.169)	(0.168)	(0.168)	(0.174)	(0.175)
Settler mortality × Post94	914.4***	801.7***	808.4***	801.2***	1,001***	991.6***
	(105.3)	(127.7)	(127.3)	(127.8)	(139.6)	(139.1)
R-squared	0.686	0.688	0.690	0.691	0.741	0.743

(*continued on next page*)

Table 6 (*continued*).

Variables	(1)	(2)	(3)	(4)	(5)	(6)
Panel C: Second stage - Dependant variable: Bureaucratic quality						
Contagion × Poor institutions	−0.205	−0.833***	−0.868***	−0.873***	−0.737***	−0.781***
	(0.139)	(0.214)	(0.212)	(0.211)	(0.227)	(0.246)
Settler mortality × Post94	0.249**	0.569***	0.587***	0.621***	0.491***	0.561***
	(0.115)	(0.150)	(0.149)	(0.147)	(0.164)	(0.178)
C-D minimum eigenvalue	72.7	34.9	34.7	34.3	30.2	26.5
Year FE	Y	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y	Y
Non-interacted treatments	N	Y	Y	Y	Y	Y
Diff. reaction if high st.cap.	N	Y	Y	Y	Y	Y
Military regimes	N	N	Y	Y	Y	Y
Democracy	N	N	N	Y	Y	Y
GDP per capita	N	N	N	N	Y	Y
External Debt	N	N	N	N	Y	Y
Exports	N	N	N	N	Y	Y
Openness to trade	N	N	N	N	N	Y
Interdependence with Mexico	N	N	N	N	N	Y
Observations	616	616	616	616	528	484
Number of countries	56	56	56	56	49	45

Notes: All models are estimated using IV. The time period included in the sample is restricted to 1987–1998. The second stage dependent variable in all columns is Bureaucratic Quality. All models include country fixed effects and year fixed effects. Contagion × Settler Mortality refers to the interaction between Post94, Settler Mortality and Closeness to Mexico. *** p < 0.01, ** p < 0.05, * p < 0.1

Table 7
Robustness check: clustered standard errors.

	Dependant variable: Bureaucratic quality					
	Reduced form estimates			IV estimates		
	(1)	(2)	(3)	(4)	(5)	(6)
Contagion × Settler mortality	−0.597*	−0.622*	−0.627**			
	(0.331)	(0.321)	(0.313)			
Contagion × Poor institutions				−0.833*	−0.868*	−0.873*
				(0.503)	(0.492)	(0.493)
Year FE	Y	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y	Y
Non-interacted treatments	Y	Y	Y	Y	Y	Y
Diff. reaction if high st.cap.	Y	Y	Y	Y	Y	Y
Military regimes	N	Y	Y	N	Y	Y
Democracy	N	N	Y	N	N	Y
GDP per capita	N	N	N	N	N	N
External Debt	N	N	N	N	N	N
Exports	N	N	N	N	N	N
Openness to trade	N	N	N	N	N	N
Interdependence with Mexico	N	N	N	N	N	N
Observations	616	616	616	616	616	616
R-squared	0.106	0.156	0.175			
C-D minimum eigenvalue				34.9	34.7	34.3
Number of countries	56	56	56	56	56	56

Notes: All models are estimated using OLS. The time period included in the sample is restricted to 1987–1998. The dependent variable in all columns is Bureaucratic Quality. All models include country fixed effects and year fixed effects. Standard errors are two-way clustered at the country and year levels. Contagion × Settler Mortality refers to the interaction between Post94, Settler Mortality and Closeness to Mexico. *** p < 0.01, ** p < 0.05, * p < 0.1.

Table 8
Placebo estimates of contagion on bureaucratic quality.

Variables	(1) Placebo ‘86	(2) Placebo ‘87	(3) Placebo ‘88	(4) Placebo ‘89	(5) Placebo ‘90	(6) Placebo ‘91
Contagion × Settler mortality	0.00153	0.0263	0.0439	0.0275	−0.0206	−0.0531
	(0.0520)	(0.0512)	(0.0494)	(0.0465)	(0.0477)	(0.0494)
Year FE	Y	Y	Y	Y	Y	Y

(*continued on next page*)

Table 8 (*continued*).

Variables	(1) Placebo '86	(2) Placebo '87	(3) Placebo '88	(4) Placebo '89	(5) Placebo '90	(6) Placebo '91
Country FE	Y	Y	Y	Y	Y	Y
Non-interacted treatments	Y	Y	Y	Y	Y	Y
Diff. reaction if high st.cap.	Y	Y	Y	Y	Y	Y
Military regimes	Y	Y	Y	Y	Y	Y
Democracy	Y	Y	Y	Y	Y	Y
GDP per capita	Y	Y	Y	Y	Y	Y
External Debt	N	N	N	N	N	N
Exports	N	N	N	N	N	N
Openness to trade	N	N	N	N	N	N
Interdependence with Mexico	N	N	N	N	N	N
Observations	366	422	478	534	590	646
R-squared	0.158	0.162	0.166	0.164	0.149	0.154
Number of countries	56	56	56	56	56	56

Notes: All models are estimated using OLS. The dependent variable in all columns is Bureaucratic Quality. All models include country fixed effects and year fixed effects. Contagion × Settler Mortality refers to the interaction between Post94, Settler Mortality and Closeness to Mexico. *** p < 0.01, ** p < 0.05, * p < 0.1.

Table 9
Falsification tests of other potential explanations.

Variables	Perceptions Perceived corruption				Budget Total government expenditures			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Contagion × Settler mortality	0.162	−0.140	−0.154	−0.153	0.738	1.318	1.525	1.855
	(0.109)	(0.175)	(0.174)	(0.174)	(0.695)	(1.143)	(1.153)	(1.154)
Year FE	Y	Y	Y	Y	Y	Y	Y	Y
Country FE	Y	Y	Y	Y	Y	Y	Y	Y
Non-interacted treatments	Y	Y	Y	Y	Y	Y	Y	Y
Diff. reaction if high st.cap.	N	Y	Y	Y	N	Y	Y	Y
Military regimes	N	N	Y	Y	N	N	Y	Y
Democracy	N	N	N	Y	N	N	N	Y
GDP per capita	N	N	N	N	N	N	N	N
External Debt	N	N	N	N	N	N	N	N
Exports	N	N	N	N	N	N	N	N
Openness to trade	N	N	N	N	N	N	N	N
Interdependence with Mexico	N	N	N	N	N	N	N	N
Observations	616	616	616	616	315	315	315	315
R-squared	0.062	0.075	0.084	0.084	0.078	0.086	0.091	0.106
Number of countries	56	56	56	56	31	31	31	31

Notes: All models are estimated using OLS. The time period included in the sample is restricted to 1987–1998. All models include country fixed effects and year fixed effects. Contagion × Settler Mortality refers to the interaction between Post94, Settler Mortality and Closeness to Mexico. *** p < 0.01, ** p < 0.05, * p < 0.1.

Table 10
Alternate mechanisms.

Dependant variable	Political ideology (1)	IMF interventions (2)	Federalism (3)	FDI (millions) (4)
Contagion × Settler mortality	−0.109	0.269**	−0.0434	5.019
	(0.107)	(0.110)	(0.0457)	(28.64)
Year FE	Y	Y	Y	Y
Country FE	Y	Y	Y	Y
Non-interacted treatments	Y	Y	Y	Y
Diff. reaction if high st.cap.	Y	Y	Y	Y
Military regimes	Y	Y	Y	Y
Democracy	Y	Y	Y	Y
GDP per capita	Y	Y	Y	Y
External Debt	Y	Y	Y	Y
Exports	Y	Y	Y	Y
Openness to trade	Y	Y	Y	Y

(*continued on next page*)

Table 10 (*continued*).

Dependant variable	Political ideology (1)	IMF interventions (2)	Federalism (3)	FDI (millions) (4)
Interdependence with Mexico	Y	Y	Y	Y
Observations	406	587	671	658
R-squared	0.016	0.031	0.189	0.221
Number of countries	40	49	56	55

Notes: All models are estimated using OLS. The time period included in the sample is restricted to 1987–1998. All models include country fixed effects and year fixed effects. Contagion x Settler Mortality refers to the interaction between Post94, Settler Mortality and Closeness to Mexico. *** p < 0.01, ** p < 0.05, * p < 0.1. Political ideology data comes from the Database of Political Institutions (Scartascini et al., 2018), which is compiled by the World Bank Development Research Group. The data categorizes parties as "Right" if they are "conservative, Christian democratic, or right-wing", "Center" if "centrist or when party position can best be described as centrist", and "Left" for "parties that are defined as communist, socialist, social democratic, or left-wing". We assign a value of 1 to those categorized as Left; 2 for those grouped as Center, and 3 for those determined to be Right.

Table 11
Correlations between State capacity/Capital controls and bureaucratic quality.

Variables	Capital controls			Bureaucratic quality		
	(1)	(2)	(3)	(4)	(5)	(6)
State capacity index	−0.0235***	−0.0238***	−0.0188***			
	(0.00376)	(0.00383)	(0.00387)			
Capital controls				−0.316***	−0.236***	−0.0462
				(0.0679)	(0.0683)	(0.0666)
Country FE	Y	Y	Y	Y	Y	Y
Perfect st.cap. control	Y	Y	Y	Y	Y	Y
Military regimes	N	Y	Y	N	Y	Y
Democracy	N	N	Y	N	Y	Y
Population	N	N	Y	N	Y	Y
GDP per capita	N	N	Y	N	Y	Y
Quality of institutions	N	N	N	N	N	Y
Observations	661	661	661	661	661	661
R-squared	0.112	0.113	0.143	0.018	0.089	0.265
Number of countries	56	56	56	56	56	56

Notes: All models are estimated using OLS. *** p < 0.01, ** p < 0.05, * p < 0.1.

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