

Judicial ineffectiveness and its impact on economic (non)development

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Abstract

This paper examines how judicial ineffectiveness contributes to economic underdevelopment. A theoretical model presents enforcement credibility as a threshold variable that shapes investment behavior, institutional feedback, and systemic trust. When courts fail to operate predictably and impartially, actors rationally withdraw from formal markets, producing stagnation and a dual legal order between those with access to external arbitration and those reliant on weak domestic systems. The empirical analysis, based on a panel of up to 150 countries (2017–2022), confirms a robust positive link between judicial effectiveness and investment, a key driver of long-term growth. The effect remains significant across specifications and robustness checks, even after controlling for property rights, rule of law, and corruption. The study concludes that judicial reform should be treated as a growth strategy. Effective courts reduce uncertainty, foster investment, and support sustainable development, while reliance on external mechanisms delays reform and deepens inequality.

Keywords

Rule of law; Judicial effectiveness; Legal asymmetry; Development economics; Institutional quality; Law and development

1 - Introduction

In recent decades, scholars in economics, law, and political science have increasingly acknowledged the centrality of institutions in shaping long-term patterns of economic development. Among the most cited theoretical foundations is the idea according to which institutions structure incentives, reduce uncertainty, and provide the framework for economic exchange (North, 1990). Yet, de-

spite this growing consensus, mainstream approaches have often equated institutional quality with formal existence—such as the presence of legal codes, courts, or constitutional texts—rather than interrogating the effectiveness of such institutions in a practical dimension. This paper proposes both a theoretical and empirical reframing of the role of legal institutions by focusing not on their nominal (*de jure*, better to say) existence, but on their actual functionality. Specifically, it advances the hypothesis that the ineffectiveness of the judiciary represents a structural barrier to sustained economic development. By ineffectiveness, we do not refer merely to delays or procedural inefficiencies, but to the broader incapacity of judicial systems to create predictable, enforceable, and universally accessible legal outcomes. In many contexts, the judiciary is plagued by underfunding, clientelism, corruption, excessive formalism, or political dependence. As a result, even where laws are nominally present and rights are formally granted, the ability of individuals and firms to rely on them in practice is severely constrained. This institutional mismatch, between the existence of legal norms and their real enforceability, produces a fragmented and uncertain legal environment in which economic actors cannot form stable expectations. It is precisely this uncertainty that deters long-term investment, discourages innovation, and reinforces a low-growth equilibrium (La Porta et al., 1997; Besley and Persson, 2011).

This theoretical claim challenges both liberal modernization theories and neoinstitutionalist approaches that emphasize legal origins, constitutional transplantation, or legal formalism as the primary drivers of growth. These models tend to focus on the “supply side” of legal systems—codes, institutional design, and legal infrastructure—while underestimating the “demand side”, namely how institutions are actually used, accessed, and trusted by individuals and firms. Our paper argues that what matters is not merely the formal presence of a judiciary, but its operational capacity to discipline behavior, coordinate expectations, and act as a credible third-party enforcer of agreements. In other words, law functions as a mechanism of economic coordination only if it can be counted on to be applied impartially, efficiently, and consistently over time. Moreover, the failure of domestic judiciaries in many countries is often addressed through external legal mechanisms such as international arbitration. These mechanisms are frequently promoted as solutions to the unreliability of local courts. However, we argue that international arbitration introduces a different set of asymmetries that may further entrench the developmental disadvantages of weak states. Because arbitration only binds those who voluntarily accept its jurisdiction—typically through bilateral or multilateral treaties—its logic is one of selective enforceability. As such, it tends to reinforce global legal hierarchies rather than equalize institutional capacities (Ginsburg, 2005; Alter, 2014). The reliance on arbitration does not compensate for the weaknesses of domestic legal systems; instead, it displaces the core functions of the judiciary onto a global legal apparatus that is largely inaccessible to small firms, local communities, or public interest litigants. The implications of judicial ineffectiveness extend beyond individual rights or commercial disputes. A dysfunctional judiciary undermines the

legitimacy of the state, erodes public trust in legal norms, and fuels the growth of informal institutions, including alternative dispute resolution mechanisms, corruption-based access to justice, or even criminal adjudication systems. In such contexts, economic life is governed not by law, but by power, influence, and patronage. This further fragments the institutional landscape and reinforces a dualistic legal order: one nominally governed by law and another governed by informal, often opaque, practices. As the predictability of legal outcomes declines, so too does the willingness of actors to engage in complex, long-term, or capital-intensive economic activities.

This paper therefore contributes to the law and development literature by constructing a theoretical model in which the judiciary is not a neutral enforcement tool, but a structurally significant variable in the developmental trajectory of states. Rather than treating legal institutions as exogenous constraints, we treat them as endogenous components of the economic system, subject to path dependencies, incentive structures, and feedback loops. In this way, our model aligns with and extends prior efforts to conceptualize the relationship between institutional weakness and underdevelopment (Acemoglu and Robinson, 2012; Rodrik, 2000).

The structure of the paper is as follows. Paragraph 2 presents a critical review of the literature, tracing the evolution of institutional thought from Weberian legality to modern theories of legal transplants, and identifies the analytical gaps that motivate our framework. Paragraph 3 develops the core theoretical model, introducing a set of interrelated variables—such as judicial predictability, enforcement credibility, and institutional asymmetry—that shape economic behavior in a setting of legal uncertainty. Paragraph 4 expands on the implications of the model, particularly in relation to investment patterns, transaction costs, and institutional divergence in the economy. Paragraph 5 develops an empirical model in which we test the role of judicial effectiveness in fostering higher investments, ultimately contributing to economic growth. Paragraph 6 explores the policy consequences of our findings, including the need to shift from formalistic judicial reform to incentive-compatible strategies aimed at improving effectiveness. Finally, paragraph 7 concludes with reflections and potential directions for future research.

By reframing judicial ineffectiveness as a central, rather than peripheral, issue, this paper seeks to redirect attention toward the qualitative performance of legal institutions and their structural role in shaping expectations, disciplining behavior, and enabling credible commitments. Our aim is to integrate legal theory more deeply into the analysis of economic development and to challenge the assumption that legal formality suffices in the absence of legal functionality.

2 - Literature Review

The relationship between legal institutions and economic development has long occupied a central place in both economics and comparative law. Early works framed the rule of law as a necessary

condition for the emergence of capitalist markets, emphasizing predictability, legal rationality, and contractual enforcement as the basis of economic coordination. Max Weber's classical thesis on the rationalization of law in Western Europe offered one of the first major articulations of this view, identifying formal legality and bureaucratic adjudication as preconditions for capitalist modernity. While Weber's framework was normative and historical rather than predictive, it established a lasting association between institutional legal order and economic progress (Weber, 1922). In the second half of the twentieth century, particularly with the rise of law and economics, scholars such as Coase (1960), Posner (1973), and Hayek (1973) deepened this intuition by arguing that legal systems structure incentives and reduce transaction costs. In these accounts, law serves a utilitarian purpose: it enables efficient allocation of resources by minimizing uncertainty and opportunism. A functioning legal system allows individuals to make credible commitments, facilitates market exchange, and ensures compliance with collective rules. These models gave rise to a functionalist conception of law, wherein the legitimacy of legal institutions is judged by their capacity to support economic coordination rather than by democratic or moral criteria.

In development economics, the institutional turn was solidified by the influential work of North (1990), who proposed a framework in which institutions are defined as the "humanly devised constraints that shape human interaction." North distinguished between formal institutions (laws, constitutions) and informal ones (norms, conventions), but emphasized that both types are crucial for shaping economic behavior. The rise of "new institutional economics" (NIE) built upon this insight, leading to an explosion of empirical and theoretical research on the relationship between institutional quality and economic growth. Within this tradition, the work of La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1997; 1998) had a particularly profound impact. Their studies linked legal origins—common law versus civil law systems—to indicators of investor protection, judicial efficiency, and market development. The so-called "legal origins theory" posited that common law countries tended to outperform civil law countries in terms of financial development, owing to their greater adaptability, case-based evolution, and emphasis on judicial discretion. These claims were supported by large-N empirical datasets and inspired numerous reforms in emerging markets. However, critics of the legal origins thesis have pointed out that its explanatory power is limited when applied to countries with weak state capacity or deep governance challenges. As Berkowitz, Pistor, and Richard (2003) noted, the success of legal transplantation depends not on the origin of the law but on the receiving country's capacity to implement and internalize it. Moreover, the emphasis on legal form—as opposed to legal functionality—has led to superficial institutional reforms that reproduce the appearance of legality without addressing the underlying dysfunctions. In many cases, legal institutions are transplanted without regard to local political, cultural, or economic conditions, resulting in what scholars have termed "legal mimicry" or "isomorphic institutionalism" (Merry, 2006; Dezalay and Garth, 2002). A complementary body of work emerged in the 2000s, led by

economists such as Acemoglu, Johnson, and Robinson (2001; 2012), who argued that the key institutional variable for development is not legal origin but the distribution of political power. Their concept of “extractive institutions” refers to those that concentrate power in the hands of elites and inhibit broad-based participation in economic life. According to their theory, colonial legacies and power structures explain why some countries developed inclusive institutions while others did not. While their framework is focused more on political institutions than on legal ones per se, it has significant implications for the study of judicial effectiveness. In particular, they emphasize that institutions are endogenous to historical trajectories and that formal legal structures can be co-opted to serve narrow interests. Other scholars have sought to integrate law more directly into models of institutional performance. Voigt (2012) developed empirical indicators of de facto judicial independence, demonstrating that formal protections of judicial autonomy are often meaningless in the absence of enforcement mechanisms and political insulation. Ginsburg (2005) highlighted how new democracies often constitutionalize judicial review without providing the resources or institutional frameworks necessary to make such review effective. Similarly, Hammergren (2007) critiqued judicial reform projects for their focus on procedural modernization rather than on structural accountability or access to justice.

An emerging subfield of law and development has therefore begun to shift attention from institutional design to institutional functionality. Scholars in this area argue that development outcomes depend not on whether courts exist, but on whether they operate in a manner that is accessible, fair, and credible. This shift is partly driven by the recognition that institutions must be embedded in broader social and political structures to function effectively (Helmke and Levitsky, 2004). Informal institutions often substitute for or undermine formal legal mechanisms, particularly where the latter are seen as corrupt, inefficient, or illegitimate. Within this functionalist turn, several studies have explored the economic consequences of legal unpredictability. Djankov et al. (2003) showed that excessive procedural formalism in developing countries significantly increases the cost and duration of litigation, thereby deterring contract enforcement. Keefer and Knack (1997) found that institutional credibility and the enforceability of property rights are positively correlated with investment and growth. These findings support the broader hypothesis that judicial effectiveness, understood as the capacity to reliably enforce rules, is a key variable in the development process. At the same time, the proliferation of international arbitration mechanisms has introduced new complexities. Originally designed to offer neutral forums for resolving investor-state disputes, arbitration tribunals now serve as parallel legal systems with significant implications for sovereignty, accountability, and distributional equity. Critics argue that arbitration tends to favor transnational capital, enforce property rights unevenly, and marginalize domestic legal orders (Van Harten, 2007; Alter, 2014). For developing countries, this means that legal inefficacy at the domestic level is not neutralized by global mechanisms—it is reinforced by a bifurcated legal system in which public

law is weak and private legal regimes dominate. The asymmetry of arbitration is particularly relevant to this paper's thesis. Because arbitration is based on consent, only states and actors who agree to its jurisdiction are bound by its outcomes. This consent-based architecture might privilege powerful actors and create legal obligations without reciprocal enforcement capacity. In this sense, arbitration operates as a form of legal exceptionalism: it generates enforceable norms for those who can afford to rely on it. The net result is a system in which legal certainty is provided to powerful actors, but not to ordinary citizens or local enterprises.

This review of the literature reveals two major analytical gaps that this paper aims to address. First, much of the existing research on institutions and development has focused on institutional form— legal origins, constitutional design, or judicial structure—without sufficiently theorizing institutional effectiveness. Second, while critiques of international arbitration have highlighted distributional concerns, few studies have connected these concerns to the broader problem of judicial ineffectiveness and developmental asymmetry. In light of these gaps, the present paper develops a theoretical model that treats judicial effectiveness as an endogenous variable in economic development. It posits that the inability of legal institutions to produce reliable, timely, and impartial decisions generates systemic uncertainty, deters long-term investment, and incentivizes informal governance structures. Furthermore, it argues that international legal regimes, particularly arbitration, do not compensate for this weakness; instead, they institutionalize legal asymmetries that exacerbate underdevelopment. The analysis is then expanded through an empirical model that tests for the role of Judicial Effectiveness in promoting one of the main channels of economic development: investments. By using regressions with country-specific fixed effects, this study recovers robust empirical results that confirm the theoretical predictions.

The paper draws on insights from law and economics, institutional theory, and critical legal studies. It conceptualizes law not as a fixed set of rules, but as a dynamic system of expectations and behaviors shaped by incentives, power relations, and credibility. In doing so, it moves beyond formalist and transplant-oriented models to develop a functionalist and contextsensitive framework for understanding the legal foundations of economic growth—or the lack thereof.

3- Theoretical Model

In this section, we propose a theoretical model to formalize the role of judicial ineffectiveness in depressing economic development. The aim is to articulate how unpredictability in legal enforcement generates systemic uncertainty, thereby disincentivizing productive investment, increasing the cost of capital allocation, and entrenching informal institutions. This model is intended to provide a conceptual framework through which institutional dysfunction can be linked to macroeconomic stagnation, and is articulated in five components: agents, institutions, expectations, enforcement

credibility, and legal asymmetry.

Let us define an economy composed of n agents. Each agent $i \in \{1, \dots, n\}$ can choose to allocate their capital endowment $c \in R^+$ between productive investment a and defensive or informal uses b , such that:

$$a + b = c.$$

The agent's decision depends on their expectation of judicial effectiveness, denoted by $e \in [0, 1]$, where $e = 1$ represents a fully effective judiciary (perfect enforcement) and $e = 0$ represents complete ineffectiveness (zero enforcement). The value of e is endogenous: it depends on institutional parameters, but also on systemic feedback loops, as will be shown.

We assume that productive investment a yields a return $r \in R^+$, which is contingent on the enforceability of contracts. Specifically, the expected return on a is:

$$R(a) = a \times (e \times f),$$

where $f \in R^+$ is a productivity multiplier determined by the technological and regulatory environment. If contracts are unenforceable ($e \approx 0$), then $R(a) \rightarrow 0$ regardless of f . Conversely, if enforcement is credible ($e \rightarrow 1$), then $R(a) \approx a \times f$.

Defensive or informal investment b yields a lower but safer return $s \in R^+$, which is independent of e . This could include bribes, clientelist networks, or liquid asset hoarding—strategies used by agents to hedge against institutional unreliability. Therefore:

$$R(b) = b \times s,$$

with $s < f$, and s constant regardless of e .

The agent chooses a and b to maximize expected return:

$$\max U = R(a) + R(b) = a \times e \times f + b \times s$$

subject to:

$$a + b = c.$$

Substituting $b = c - a$ into the utility function:

$$U(a) = a \times e \times f + (c - a) \times s,$$

$$U(a) = a(e \times f - s) + c \times s.$$

The first-order condition for maximum utility:

$$\frac{dU}{da} = e \times f - s = 0.$$

Thus, the optimal choice of a is:

$$a^* =$$

- c , if $e \times f > s$,
- 0 , if $e \times f < s$,
- indeterminate, if $e \times f = s$.

This reveals a critical insight: when the product of enforcement credibility and productivity exceeds the return from informal strategies, agents will invest fully in formal production ($a^* = c$). Otherwise, they revert entirely to informal mechanisms ($a^* = 0$). Therefore, e serves as a threshold variable that determines the qualitative nature of economic behavior.

Let us now define the dynamics of e . Judicial effectiveness e is itself a function of systemic variables:

$$e = g(d, p, q).$$

Where:

$d \in R^+$ = institutional density (number of courts, judges, procedural structures),

$p \in R^+$ = political independence of the judiciary,

$q \in R^+$ = procedural accessibility and transparency.

The function $g(\cdot)$ is increasing in all its arguments but with diminishing marginal returns:

$$\frac{\partial e}{\partial d} > 0, \quad \frac{\partial e}{\partial p} > 0, \quad \frac{\partial e}{\partial q} > 0,$$

$$\frac{\partial^2 e}{\partial d^2} < 0, \quad \frac{\partial^2 e}{\partial p^2} < 0, \quad \frac{\partial^2 e}{\partial q^2} < 0.$$

Furthermore, e is subject to an endogenous feedback mechanism: the more agents choose $a > 0$, the more resources and legitimacy the judiciary receives, which in turn increases d , p , and q over time. Conversely, if most agents shift to b , institutional decay accelerates.

Let $\theta \in [0, 1]$ denote the proportion of agents choosing $a > 0$. Then:

$$\dot{d} = h(\theta) - \delta \times d,$$

$$\dot{p} = k(\theta) - \phi \times p,$$

$$\dot{q} = m(\theta) - \eta \times q,$$

where h, k , and m are increasing functions of θ , and $\delta, \phi, \eta > 0$ represent institutional decay rates in the absence of legal use.

This defines a recursive dynamic in which judicial effectiveness is both a cause and a consequence of economic expectations. The system exhibits hysteresis: once e falls below a certain level, rational agents abandon the formal economy, leading to further institutional erosion and a potential trap.

To analyze equilibrium, define two states:

1. Legal equilibrium (LE): $e^* > \hat{e} \Rightarrow a^* = c$ for all i ,
2. Informal equilibrium (IE): $e^* < \hat{e} \Rightarrow a^* = 0$ for all i .

Where $\hat{e} = \frac{s}{f}$ is the critical threshold. Transitions between LE and IE are not symmetrical: moving from IE to LE requires exogenous shocks or coordinated reform that increases e above \hat{e} .

Now introduce international arbitration as a substitute mechanism. Let $z \in [0, 1]$ denote access to international arbitration. Only a subset of agents, typically foreign investors or transnational firms, have $z > 0$. Their effective enforcement becomes:

$$e' = e + z \times \gamma,$$

where $\gamma \in R^+$ is the enforcement gain from arbitration.

For agents with $z \approx 1$, even if $e \approx 0$, we have $e' \approx \gamma$, allowing them to maintain $a^* > 0$. However, the existence of this asymmetry creates dual institutional regimes: one for privileged actors (with access to z) and another for local agents (without access). Over time, this institutional bifurcation entrenches inequality and discourages domestic reform, as key economic activities shift outside the scope of national institutions.

Finally, define aggregate growth G as a function of total formal investment $A = \sum a$:

$$G = \lambda \times A,$$

where $\lambda \in R^+$ is a structural growth multiplier. In the informal equilibrium, $A \rightarrow 0$ and $G \rightarrow 0$. Thus, judicial ineffectiveness $e < \hat{e}$ locks the system into a low-growth trap. The only escape lies

in interventions that increase e above \hat{e} and align $z = 0$ for all i , ensuring institutional homogeneity. This model shows that development is not only a function of legal existence but of enforceability and trust. The effectiveness of the judiciary plays a threshold role in economic behavior, and institutional asymmetry between domestic and international legal orders reinforces underdevelopment rather than correcting it. Therefore, development strategies must target the functional improvement of legal systems—not merely their expansion—and avoid reliance on extraterritorial mechanisms that circumvent domestic legitimacy.

4 - Theoretical Implications

The theoretical model outlined in the preceding section demonstrates that judicial ineffectiveness is not merely a technical or administrative failure but a systemic barrier that structurally alters the economic behavior of agents. When enforceability expectations fall below a critical threshold, rational actors shift capital away from formal, productive investment. This shift has consequences for macroeconomic development, institutional legitimacy, and social cohesion. The implications of such a transition are both horizontal—affecting the distribution of investment across sectors and classes—and vertical—deepening structural asymmetries between domestic and international legal orders.

A first key implication is the entrenchment of a dual economy. Under weak judicial enforcement (low e), agents divide into two groups: those who can access credible enforcement through alternative mechanisms (typically via international arbitration, $z > 0$), and those who remain dependent on domestic systems ($z = 0$). This bifurcation leads to a segmentation of economic space. Powerful actors continue to operate under conditions of legal predictability, while weak ones are relegated to a zone of legal precariousness. As a result, what emerges is a “judicial dualism”. This dualism does not merely reflect an inequality of legal outcomes—it reproduces and deepens economic underdevelopment.

A second implication concerns the dynamics of institutional credibility. In the model, the credibility of the judiciary is not static; it is shaped by recursive feedback loops. As agents increasingly withdraw from the formal legal system, the state collects fewer resources, faces lower public demand for quality adjudication, and has weaker incentives to invest in institutional reform. This self-reinforcing cycle, comparable to what North, Wallis, and Weingast (2009) describe as a “limited access order,” leads to institutional stasis and decay. Without credible signals that enforcement quality will improve, agents rationally opt for exit rather than voice (Hirschman, 1970), further eroding the political and fiscal foundations of reform.

A third and particularly pernicious implication involves the distribution of political power. In some countries, the judiciary is not merely ineffective—it is captured by executive authorities or eco-

conomic elites. Judicial outcomes can be strategically manipulated to favor certain actors. In such contexts, law functions less as a mechanism of dispute resolution and more as an instrument of political control. This aligns with the theory of “extractive institutions” developed by Acemoglu and Robinson (2012), in which legal institutions serve to entrench the privileges of a dominant coalition rather than promote inclusive development. Under these conditions, judicial ineffectiveness becomes a feature rather than a bug: a deliberate design choice that protects incumbents from accountability and undermines checks and balances. Moreover, the international legal architecture contributes to, rather than resolves, this institutional disequilibrium. As shown in the model, arbitration access ($z > 0$) offers privileged actors a mechanism to bypass domestic courts. While this may seem efficient in the short term, it has three adverse longterm consequences. First, it reduces the domestic pressure for judicial reform, since key economic stakeholders no longer depend on local institutions. Second, it fragments the legal system, creating jurisdictional overlaps and normative inconsistencies. Third, it undermines democratic sovereignty, as legal outcomes are shaped by transnational tribunals rather than by public law institutions. This logic echoes the critique advanced by scholars of transnational legal orders, who argue that globalization has created “disembedded” regimes of legal authority with limited social legitimacy (Teubner, 1997; Slaughter, 2004).

To summarize, the implications of the model presented in Paragraph 3 are multifaceted and deeply structural. Judicial ineffectiveness is not a standalone issue but an institutional node that connects economic behavior, political incentives, and legal norms. It generates a vicious cycle in which rational adaptation by agents leads to systemic dysfunction. Attempts to compensate for this weakness through international legal mechanisms may offer temporary relief for some actors but ultimately reinforce institutional divergence and developmental stagnation. Addressing this challenge requires more than procedural reform or legal transplant—it demands a systemic rethinking of the role of the judiciary in the architecture of development.

5 - Empirical Model

The previous sections of this study showed how economic growth depends on the judicial system effectiveness. Indeed, sound judicial institutions can support development by creating trust in the legal system and making economic transactions safer. When courts work well, contracts are easier to enforce, property rights are better protected, and investors face lower risks. These factors encourage firms and individuals to invest, which in turn supports growth. Studying this relationship directly with GDP as the dependent variable is, however, problematic. While it is possible that higher efficiency in the judicial area determines higher GDP, the relationship could also work the other way around. Richer countries may indeed improve their courts simply because they have

more resources, thus determining reverse causality issues. The fixed-effects regressions used in this study cannot fully solve this problem. For this reason, the analysis focuses on investment as the outcome variable, since it is one of the main channels through which institutions affect economic development. By controlling for per capita GDP, such issue can be at least mitigated, even if not fully overcome. If courts are effective and rules are more easily enforced, investors are more willing to commit resources because they know their contracts and property will be respected. Higher investment rates are likely to generate sustained economic growth in the medium and long run.

The empirical section follows three steps. First, we describe the data sources and the main variables of interest. Second, we present the baseline regression with country and year fixed effects, and then expand the model by adding institutional and macroeconomic controls to isolate the effect of judicial effectiveness. Third, we conduct robustness checks with alternative specifications and datasets to verify that the results are not driven by specific indicators or sample composition.

Data and methodology

This study includes as many countries as possible in order to provide generalizable results. By combining multiple sources, we construct a panel dataset covering 150 countries observed from 2017 to 2022. Due to data limitations, the sample is composed of 16 low-income countries, 44 lower-middle-income countries, 44 upper-middle-income countries, and 46 high-income countries. Compared with the full population of existing states, the sample can be considered fairly representative. The data are drawn from the World Bank, the Heritage Foundation's Index of Economic Freedom, and the World Justice Project (WJP).

The dependent variable is investment. Such a variable is measured as the gross capital formation registered in one year in one country, expressed as percentage of GDP. The average investment is 24.52% of GDP. The World Bank provides data on investment, GDP per capita (in current USD), inflation, trade openness (as a share of GDP), final consumption expenditure (as a share of GDP), and income group. The parameter of interest, Judicial Effectiveness, descends from the Heritage Foundation's Index of Economic Freedom. It is the product of the average of judicial independence, quality of the judicial process, and perceptions of the quality of public services and the independence of the civil service. These measures rely on external sources such as Freedom House, Freedom in the World, and the World Bank's Worldwide Governance Indicators. The same database also provides data on property rights- assessing the extent to which a country's legal framework allows individuals to acquire, hold, and utilize private property and the extent to which these rights are secured by applicable laws that the government enforces effectively- , rule of law - - and tax burden. The measure of tax burden ranges from 0 to 100 and associates better scores with lower

Table 1: Summary statistics of variables

Variable	Obs	Mean	Std. Dev.	Min	Max
Log GDP Per Capita (Current USD)	900	8.81	1.40	5.35	11.81
Investments	902	24.41	8.11	-15.68	55.78
Judicial Effectiveness	902	47.77	20.58	6.90	98.00
Trade	897	88.54	54.97	2.70	412.18
Consumption	897	79.47	15.67	32.37	162.88
Corruption Perception Index	826	45.16	18.90	16.00	90.00
Rule of Law	892	62.23	9.87	26.90	89.70
Tax Burden	894	77.35	12.42	37.20	100.00
Rule of Law (WJP)	520	56.79	14.33	31.17	90.18
Absence of Corruption (WJP)	520	52.25	19.16	22.68	95.57
Regulatory Enforcement	520	55.29	15.21	25.31	89.90
Civil Justice Efficiency	520	55.65	13.67	20.62	87.92
Criminal Justice Efficiency	520	48.12	16.17	20.82	84.72

taxes. The WJP database includes a wider set of institutional indicators. In this study, we use absence of corruption, regulatory enforcement, civil justice efficiency, criminal justice efficiency, and a second measure of rule of law. A limitation of the WJP data is that fewer observations are available. On average, World Bank variables include around 900 observations, while WJP variables include about 520. Corruption is also measured through the Corruption Perceptions Index (CPI), one of the most widely used indicators. However, because CPI is based on perceptions that may be influenced by many factors, we also use the alternative corruption measure from the WJP database. To estimate the relationship between judicial effectiveness and investment, we apply a fixed effects regression with both country and year fixed effects. Country fixed effects control for time-invariant characteristics, such as geography, colonial history, and culture. Year fixed effects capture global shocks, such as the COVID-19 pandemic or changes in international financial conditions, that affect all countries in the same year. The baseline model is written as:

$$Investment_{it} = \alpha + \beta JudicialEffectiveness_{it} + \gamma X_{it} + \mu_i + \tau_t + \varepsilon_{it}$$

where i denotes the country and t the year. X_{it} is a set of control variables such as GDP per capita, trade openness, and consumption. μ_i are the country fixed effects, and τ_t are the year fixed effects. This specification focuses on changes within countries over time, while at the same time removing the influence of country-specific factors that do not vary and global factors that affect all countries equally. The main parameter of interest is β , which captures the average effect of judicial effectiveness on investment. This framework allows us to obtain robust estimates and to show whether judicial effectiveness supports investment and, in the longer run, GDP.

Results

The baseline model starts from the basic macroeconomic identity, where GDP is the sum of investments, government spending, household consumption, and net exports. In our setting, we aggregate household and government consumption into a single consumption parameter, equal to the sum of the two, while net exports are broadened to include the overall weight of trade, expressed as exports plus imports on GDP. The framework is then expanded by introducing a measure of the tax burden in the economy. This institutional variable is likely to impact investments, since higher taxes reduce private incentives to invest by reallocating a greater share of returns to the state. As already mentioned, in the tax burden index, higher scores indicate lower effective taxation. The table below reports the regression analysis described above.

Table 2: Baseline model and extentions

	(1)	(2)	(3)	(4)	(5)
	<i>Dependent variable: investments</i>				
Log GDP per capita	1.538 (2.752)	1.645 (2.741)	1.554 (2.725)	2.838 (2.620)	2.884 (2.595)
Consumption (as % of GDP)	-0.039 (0.078)	-0.041 (0.077)	-0.039 (0.078)	-0.040 (0.092)	-0.040 (0.093)
Trade (as % of GDP)	0.061 (0.037)	0.061* (0.036)	0.061 (0.037)	0.083** (0.040)	0.083** (0.039)
Tax Burden	0.157*** (0.056)	0.159*** (0.056)	0.158*** (0.056)	0.185*** (0.058)	0.184*** (0.059)
Judicial Effectiveness	0.034** (0.016)	0.047** (0.021)	0.036* (0.019)	0.041** (0.019)	0.046* (0.027)
Property Rights		-0.038 (0.042)			-0.025 (0.042)
Rule of Law			-0.008 (0.103)		0.026 (0.106)
Corruption Perceptions Index				0.024 (0.096)	0.024 (0.096)
Adj. R-squared	0.837	0.837	0.836	0.844	0.843
Within R ²	0.048	0.051	0.048	0.077	0.078
Countries	149	149	148	137	136
Observations	887	887	885	811	809

Standard errors in parentheses clustered at the country level.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

The regression reported in the first column of Table 2 delivers an important first result: judicial effectiveness is statistically significant at the 5% level and positively associated with investment. Specifically, a 10 point increase in Judicial effectiveness is associated with a 0.34 percentage point

increase in investments. Such an effect, even if limited in magnitude, shows a link among the variables and remains significant when controls are included in the regression. The lower the taxes in a country, the more people would like to invest. A 1 point increase in the tax burden score is associated with a 0.157 percentage points increase in investments. Such effect is always statistically significant and maintains similar magnitudes among the different models presented. The more a country is involved in trade, the more its investments will grow. The effect is not, however, always statistically significant. No role for log GDP per capita and final consumption expenditure. While the first one is expected, since the dependent variable of interest is already expressed as a percentage of GDP, the latter is quite surprising, though not central to the study. We then expand the baseline model by adding further institutional variables, such as property rights, rule of law, and corruption (measured by the Corruption Perceptions Index). These indicators could overlap with judicial effectiveness, yet by adding such parameters, we do not register relevant changes. Judicial effectiveness remains relatively stable in terms of both significance and coefficient. Only when adding the rule of law indicator significance levels descend to 5.9% and 9.1%. The other results remain unchanged, with tax burden score always highly statistically significant, trade becoming relevant and consumption and log GDP not. The tax burden score stays highly significant, trade gains some relevance, while consumption and log GDP continue to be insignificant. The coefficient of the intercept is omitted, as we are using fixed effects. One possible concern is that the tax burden could be driving the effect. However, regressions run without this indicator show that judicial effectiveness still maintains similar magnitude and significance. The number of countries analyzed ranges from 149 in the first regressions to 136 in the last, depending on data availability.

To test robustness, we add alternative institutional controls from the World Justice Project, which offers indicators for rule of law, corruption, regulatory enforcement, civil and criminal justice efficiency. Results are reported in Table 3. Due to data constraints, we can run the analysis for 112 countries. The number of observations decreases from 887 in the main regression model to 515 in the current one, thus losing some statistical power. Yet, the main conclusions remain valid.

Judicial effectiveness continues to show a positive and statistically significant effect on investment across all specifications. The coefficient is slightly smaller compared to the baseline models, but its significance is stable at the 5% level. This confirms that the effect is not dependent on the dataset used and holds even under stricter tests. Consumption and GDP per capita remain without a clear role. Their coefficients are unstable and not highly statistically significant. Trade openness becomes stronger and more consistently significant than in the baseline regressions. Across all five models, trade is positive and highly significant (1% level), suggesting that participation in international markets is an important factor for investment, especially when tested together with WJP indicators. Tax burden shows no significant effect in this set of regressions, unlike in the baseline models. This suggests that fiscal incentives alone are not sufficient once stronger institutional in-

dicators are considered. Among the additional WJP institutional variables, rule of law (WJP) does not reach statistical significance. Absence of corruption shows significance in the second column, but loses it in other models, suggesting a weak and unstable effect. Civil justice and criminal justice efficiency scores are positive but never significant. The reason might be that only when considered together the effect of judicial effectiveness has a magnitude that can be captured by the econometric techniques. Again, the coefficient of the intercept is omitted, since we are in a fixed effects framework.

Table 3: Robustness checks

	(1)	(2)	(3)	(4)	(5)
	<i>Dependent variable: investments</i>				
Log GDP per capita	3.183 (2.614)	2.883 (2.637)	3.467 (2.624)	3.086 (2.605)	2.761 (2.600)
Consumption (as % of GDP)	-0.179* (0.101)	-0.181* (0.101)	-0.173* (0.100)	-0.182* (0.101)	-0.180* (0.099)
Trade (as % of GDP)	0.126*** (0.025)	0.126*** (0.025)	0.128*** (0.025)	0.124*** (0.025)	0.124*** (0.025)
Judicial Effectiveness	0.028** (0.014)	0.030** (0.014)	0.031** (0.015)	0.029** (0.014)	0.030** (0.014)
Tax Burden	0.080 (0.062)	0.086 (0.063)	0.085 (0.063)	0.089 (0.062)	0.094 (0.065)
Rule of Law (WJP)	0.261 (0.204)				-0.147 (0.316)
Absence of Corruption (WJP)		0.220* (0.129)			0.220 (0.156)
Civil Justice Score			0.101 (0.128)		0.064 (0.161)
Criminal Justice Score				0.152 (0.131)	0.125 (0.147)
Adj. R-squared	0.869	0.869	0.868	0.868	0.869
Within R ²	0.159	0.164	0.154	0.158	0.167
Clusters	112	112	112	112	112
Observations	515	515	515	515	515

Standard errors in parentheses clustered at the country level.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Overall, the robustness checks reinforce the central finding: judicial effectiveness remains a significant and reliable driver of investment even when alternative measures of institutional quality are introduced. At the same time, the results highlight the complementary role of trade openness and show that other institutional indicators, such as corruption control or justice efficiency, are less stable in their impact.

Empirical Implications

The empirical evidence clearly confirms the central role of judicial effectiveness in encouraging investment, which is one of the most important channels for supporting long-term economic growth. The regression results remain stable and positive across different model specifications and robustness checks. This means that the effect of judicial effectiveness on investment is not accidental or dependent on a single model but reflects a deeper structural relationship. From the analysis, we can retain two main implications:

First, courts play an independent role that cannot be replaced by other governance factors. In fact, the estimated effect of judicial effectiveness does not disappear when the analysis includes additional institutional variables such as property rights, the rule of law, and corruption. This demonstrates that the judiciary captures a distinct dimension of institutional quality that is central to investment decisions.

Second, judicial reform should be understood as a central part of an economic growth strategy, and not only as a technical question of governance or as a matter of legal fairness. When courts are effective, they provide firms and individuals with the confidence that their contracts will be respected and that their property rights will be protected. This reduces uncertainty, lowers transaction costs, and makes it easier for investors to commit resources to long-term projects. In this way, stronger courts do not only improve the delivery of justice but also create a safer environment for economic activity, directly encouraging investment, stimulating productive entrepreneurship, and supporting broader development.

Overall, the findings suggest that improving judicial systems is valuable not only for governance but also as a catalyst for economic activity by fostering investment. At the same time, it is important to recognize the limits of the methodology: the results identify correlations rather than causation. The theoretical discussion explained why judicial effectiveness can be seen as a determinant of growth, and the empirical analysis demonstrated a consistent and robust link with investment. Establishing a clear causal relationship, however, remains a task for future research.

6 - Policy Implications

The analysis developed so far reveals that judicial ineffectiveness is not simply a consequence of underdevelopment but a contributing cause, embedded in feedback loops that reinforce low-investment equilibria, institutional decay, and social fragmentation. This section outlines a set of normative proposals aimed at breaking the vicious cycle of judicial ineffectiveness and economic stagnation, grounded in both the theoretical and empirical frameworks developed in the previous sections.

The first implication is that judicial reform should focus on effectiveness rather than formal structure. Many donor-funded projects have emphasized new laws, constitutions, or councils, but such measures often improve appearances without changing performance (Carothers, 2006). What matters more is the actual enforceability of court decisions, especially their predictability, speed, and impartiality. To achieve this, judges and court officials should face clear incentives that reward efficiency and fairness while penalizing corruption. These incentives can be monetary and reputational, for example through public data on case resolution times or appeal outcomes. Experiences such as Brazil's Justice in Numbers report and Georgia's post-Soviet reforms show that such approaches can deliver real improvements in judicial performance (Dakolias, 1999; Hammergren, 2002).

The second implication is that judicial reform must be sequenced carefully and protected from political interference. Because reform threatens elites who benefit from weak courts, it often faces resistance. Early reforms should therefore focus on technical improvements—such as automating filings, digitizing records, or assigning cases randomly—which reduce discretion without provoking strong opposition. Once these measures build credibility and public support, more sensitive reforms, like judge reappointment or stronger judicial councils, can follow. To shield reforms from interference, insulation mechanisms are needed, including tenure guarantees, independent budgets, and civil society oversight. Evidence from Eastern Europe shows that where appointments remain politicized, judicial independence quickly erodes (Popova, 2010).

The third implication is that reform must improve both legal accessibility and social legitimacy. Judicial ineffectiveness is not only about elite capture but also about barriers faced by ordinary citizens, such as high fees, complex procedures, distance, and language. These obstacles push people toward informal systems—like customary or religious adjudication—that may be biased or discriminatory. To counter this, development strategies should expand access to justice through legal aid, mobile courts, simplified procedures, and community paralegals (Golub, 2003). At the same time, courts must build public trust by being transparent and visibly fair. Tools such as citizen feedback, corruption hotlines, and civic education programs can strengthen legitimacy and reduce dependence on informal mechanisms.

The fourth implication is that governments should avoid outsourcing legal credibility through mechanisms like international arbitration or investor–state dispute settlement (ISDS). While such tools may offer short-term benefits for foreign investors, they deepen institutional asymmetries, create a two-tiered legal order, and reduce pressure for domestic reform. Instead, governments should focus on strengthening their own systems by establishing commercial courts, improving regulatory enforcement, and training specialized judges. Experiences from Singapore and Rwanda show that well-sequenced and politically supported domestic reforms can build legal certainty and attract investment (World Bank, 2017).

In conclusion, the policy implications of the model presented in this paper call for a profound rethinking of the role of the judiciary in development. Legal systems must be treated not as residual technical infrastructure but as core economic institutions whose effectiveness shapes the incentives, expectations, and capabilities of market actors. Reform strategies must be politically aware, socially inclusive, and strategically sequenced. They must avoid the trap of legal formalism and instead focus on functionality, credibility, and legitimacy. Only by integrating judicial reform into the heart of development policy can countries escape the trap of under-enforcement, underinvestment, and underdevelopment.

7 - Conclusions

This study has shown that judicial effectiveness is not a minor institutional detail but a structural condition for economic development. The theoretical model demonstrated how weak enforcement triggers a vicious cycle: when courts are ineffective, agents rationally divert resources away from formal, productive investment. This produces not only economic inefficiency but also deeper institutional and political distortions, including judicial dualism, loss of institutional credibility, and the consolidation of extractive structures of power. Attempts to bypass weak courts through international arbitration may help some actors in the short run but ultimately reinforce inequality and delay domestic reform. The empirical analysis confirmed and refined these insights. Using a panel dataset of up to 150 countries between 2017 and 2022, the results showed a stable and positive association between judicial effectiveness and investment. This effect remained significant across different model specifications and robustness checks, even when controlling for other institutional factors such as property rights, rule of law, and corruption. By contrast, fiscal and macroeconomic variables, including taxation and trade, displayed more mixed or unstable effects. These findings suggest that the judiciary exerts an independent influence on investment, one that cannot be replaced by other institutional or economic policies. Taken together, the theoretical and empirical results highlight three main lessons. First, judicial reform should be seen as a growth strategy, not just a matter of legal fairness. Second, improvements in courts are necessary to allow every agent to rely on fair and effective protection of property rights, not only the most powerful actors, who could recur to international arbitration. Third, weak judicial systems push economies toward short-termism, reducing incentives for long-term productive commitments.

The policy discussion translated these lessons into a set of practical recommendations. Reforms must focus on effectiveness rather than formal design, be carefully sequenced to avoid political obstruction, and expand access to justice for ordinary citizens. In addition, governments should resist the temptation to rely on international arbitration as a substitute for domestic credibility, and instead invest in their own institutions. Experiences from countries such as Brazil, Georgia,

Singapore, and Rwanda show that such reforms, when politically supported and insulated from capture, can deliver tangible improvements in both legal certainty and economic performance.

To conclude, judicial effectiveness acts as both a legal and an economic foundation. Weak courts generate institutional and developmental traps, while stronger courts foster trust, investment, and long-term growth. Addressing judicial ineffectiveness therefore requires more than technical adjustments: it demands a systemic rethinking of the role of the judiciary in development. Future research should build on these findings to identify causal mechanisms and explore how specific reforms can break the vicious cycle of weak enforcement and low investment.

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