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The impact of provincial-level institutional quality on attracting foreign direct investment in the red river delta provinces

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Abstract

This study empirically investigates provincial-level institutional quality's impact on foreign direct investment (FDI) inflows within Vietnam's Red River Delta region (2009–2023), addressing a literature gap concerning how subnational governance affects FDI distribution in a rapidly transitioning economy. Inspired by the Worldwide Governance Indicators (WGI) framework, an Ordinary Least Squares (OLS) panel regression model analyzed data from 11 provinces over 15 years. Key Provincial Competitiveness Index (PCI) sub-indices – specifically time costs, informal charges, leadership dynamism, and legal institutions – served as proxies for institutional quality, with controls for market size, labor quality, and infrastructure. Results reveal that market size (population) and labor quality (share of trained labor) are strong positive FDI determinants; proactive and dynamic provincial leadership also significantly attracts investment. Conversely, higher informal charges and burdensome administrative time costs act as significant deterrents. Surprisingly, infrastructure capacity exhibited a negative correlation with FDI in this regional context, while the rule of law did not show a statistically significant effect at the provincial level. The study concludes that subnational institutional quality is a critical determinant of FDI patterns in Vietnam, playing a decisive role beyond uniform national policies. Investors appear to prioritize informal institutional aspects like administrative efficiency and local governance responsiveness, particularly where formal legal structures are relatively consistent. These findings call for policymakers to strengthen provincial-level governance by targeting specific local bottlenecks such as reducing administrative delays and informal charges, and fostering dynamic leadership as essential complements to broader national initiatives to attract and sustain high-quality FDI.

Keywords: FDI, institutional quality, PCI, Red River Delta, subnational governance, Vietnam.

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1. Introduction

FDI plays a pivotal role in driving economic growth, technology transfer, and industrial upgrading in developing economies. In Vietnam, FDI has been a substantial contributor to job creation, export performance, and productivity enhancement across sectors. However, despite uniform national policies, FDI inflows are unevenly distributed across provinces, suggesting that subnational factors, particularly institutional quality, significantly influence investor behavior.

While existing literature has extensively examined national-level determinants of FDI, there is a growing recognition that local institutions are critical in shaping investment outcomes, especially in decentralized and rapidly transitioning economies [1-3]. This is particularly relevant for Vietnam, where provincial governments are granted considerable discretion in implementing national policies, leading to significant institutional heterogeneity across regions. This heterogeneity is well-captured through indices such as the PCI, which offers granular insights into governance, administrative efficiency, and regulatory quality at the local level. Despite this institutional variation, few empirical studies have systematically examined how the distinct dimensions of subnational institutional quality such as government effectiveness, corruption control, rule of law, and leadership proactiveness affect FDI distribution across provinces. This gap is particularly pronounced for the Red River Delta, an economically vital region that hosts both high-performing and underperforming provinces in terms of FDI but remains understudied in subnational investment research.

Therefore, this paper aims to fill this gap by empirically investigating the impact of provincial-level institutional quality on FDI inflows in the Red River Delta during the period 2009–2023. Drawing on the WGI framework [4] and recent subnational governance research [5, 6] this study constructs a panel data regression model using PCI sub-indices as proxies for key institutional dimensions.

This study contributes to the literature by: (1) offering new empirical evidence from a transition economy where local institutions play a growing role in investment facilitation; (2) disaggregating institutional quality into distinct dimensions to identify which aspects matter most to investors; and (3) highlighting the policy relevance of strengthening subnational governance as a complement to national reforms.

The remainder of the paper is organized as follows. Section 2 reviews the theoretical and empirical literature on institutional quality and FDI. Section 3 outlines the empirical model, data sources, and variable construction. Section 4 presents the descriptive statistics and regression results. Section 5 discusses the findings considering recent scholarship, and Section 6 concludes with policy implications.

2. Literature Review

2.1. Definition and scope of Provincial-Level Institutional Quality

The definition and scope of provincial-level institutional quality can be elucidated by examining various studies that explore institutional quality at different administrative levels and its impact on socio-economic outcomes. Provincial-level institutional quality pertains to the characteristics and operational effectiveness of institutions at the provincial tier, which influence their overall functioning and the fulfillment of their designated missions. This concept is multidimensional, encompassing contextual, internal, and external conditions. Contextual conditions refer to socio-economic and legal elements such as autonomy and the level of bureaucracy. Internal conditions include factors like the prevalence of meritocracy, the influence of interests, and the role of organized groups within the institutions. Finally, external conditions relate to the proactivity, innovation, and strategic alliances formed with influential external actors [7].

The scope of provincial-level institutional quality is broad, with significant implications for regional development and governance. A strong correlation has been identified between the quality of provincial institutions and economic performance. In the context of China, for example, provincial institutional quality has been demonstrated to be a more crucial determinant of economic growth than geography or market integration [8]. Furthermore, superior local institutions are linked to enhanced productivity among small and medium-sized enterprises, indicating that institutional quality is a key driver of regional economic development [1]. This influence extends to public service efficiency. Research in Italy shows that the quality of provincial institutions directly affects the cost efficiency of social services, with control of corruption, the rule of law, and regulatory quality being critical determinants [9]. Similarly, the efficient provision of essential transport infrastructure is closely linked to the quality of the institutional environment at both regional and provincial levels [10].

Beyond economic and service delivery impacts, institutional quality is fundamental to governance and accountability. It involves the mechanisms necessary to ensure transparency, effective governance, and public accountability. For instance, quality assessments of public administration in various provinces serve as a guide for improvements in service delivery and accountability frameworks [11, 12]. The importance of transparency and professional assistance in managing regional finances further highlights the critical role of institutional quality in achieving governance reform objectives [12]. Moreover, the effects of institutional quality are not confined by administrative borders. Studies have observed positive spillover effects, where improvements in the institutional quality of one province can enhance the quality in neighboring provinces, as evidenced by research in Vietnam [13]. In summary, provincial-level institutional quality is a multifaceted construct that is instrumental for fostering economic development, ensuring the efficient delivery of public services, and promoting effective governance, with impacts that can extend across regions.

Acknowledging this multifaceted nature and broad impact, for the purposes of this study, provincial-level institutional quality is operationally defined as: "the degree of transparency, accountability, rule of law, resource allocation efficiency, public service delivery, and policy enforcement – as well as the capacity for foresight and adaptability to environmental changes – within the regulatory framework and organizational structure of provincial governments."

2.2. Measuring Local Institutional Quality in Vietnam

In addition to global institutional indicators applied at the national level, Vietnam has developed several indices to measure subnational institutional quality. The three most notable indicators include: the PAPI, the PCI, and the Public Administration Reform Index (PAR Index). Among these, the PCI has gained widespread use in empirical research due to its focus on the business environment and institutional factors directly relevant to firms and investors.

Studies such as North [14] have employed composite indicators to capture various dimensions of local governance quality, such as responsiveness and community embeddedness. Moreover, empirical approaches using multi-method designs and robust estimations [7, 10] are recommended to evaluate institutional performance and its economic impact effectively.

2.3. Theoretical perspectives on the impact of provincial-level institutional quality on attracting FDI

Understanding the intricate relationship between institutional quality and FDI necessitates an examination of various theoretical frameworks and empirical studies. These investigations collectively offer valuable insights into how the characteristics of a host country's institutions can influence FDI inflows and the subsequent economic impacts.

The link between institutional quality and FDI attraction can be examined through several key theoretical lenses. A foundational perspective is New Institutional Economics (NIE), pioneered by figures like North [14] and Coase [15]. NIE asserts that both formal institutions (e.g., laws, regulations) and informal ones (e.g., norms, trust) shape economic behavior by reducing transaction costs, securing property rights, and facilitating contractual compliance. Consequently, institutional frameworks that fail to protect ownership or exhibit weak enforcement mechanisms are likely to deter investment and foster economic inefficiencies. A second crucial framework is the Eclectic Paradigm (OLI Model) developed by Dunning, which posits that FDI occurs when three conditions are met: Ownership-specific advantages (O), Location advantages (L), and Internalization benefits (I). Within this model, institutional quality, especially at the local level is a critical component of location attractiveness, as it reduces uncertainty and supports the operational efficiency of foreign firms [16]. Building on this, the Institutional FDI Fitness Theory [17] emphasizes that countries and regions with institutional environments aligned with investor expectations are better positioned to attract and retain FDI. This theory suggests that institutions, beyond just market size or resource endowments, form the core of a location's investment competitiveness.

Further theoretical elaborations add nuance to this relationship. For instance, institutional dynamism – frequent or unpredictable institutional changes may heighten uncertainty and thus deter investment [18]. In contrast, stable institutional environments, characterized by a strong rule of law and low corruption, tend to attract more FDI by mitigating risks and enhancing investor confidence [19, 20]. The concept of institutional distance, or the differences in institutional quality between home and host countries, can also act as a barrier to FDI [21, 22]. Moreover, high political risk and specific regime types may either deter or, paradoxically, attract certain types of FDI under specific strategic conditions [23].

2.4. Empirical perspectives on the impact of provincial-level institutional quality on attracting FDI

The empirical literature provides extensive evidence that institutional quality is a critical, albeit complex, determinant of FDI inflows. At the national level, studies consistently show that strong institutions, characterized by political stability and regulatory efficiency, attract FDI by reducing business costs and risks [24, 25]. This relationship is often nuanced, with institutions acting as a significant moderator for other factors like technological capability and financial development [26, 27]. The impact of institutions also varies across contexts, differing by country income levels [28] and sometimes revealing a paradoxical role for factors like corruption [29]. Furthermore, much of this literature points to the existence of "threshold effects," where a minimum level of institutional quality is a prerequisite for FDI to yield positive growth effects [30-32].

Building on these national-level insights, a growing and highly relevant body of research now focuses on the decisive impact of provincial-level institutional quality. This literature argues that subnational institutions directly influence firm productivity and local economic outcomes. For instance, findings confirm that strong local institutional quality contributes to improvements in Total Factor Productivity (TFP), internal efficiency, and technological advancement [1, 33]. Better local regulatory environments enhance overall firm performance [34] with this relationship often varying by firm size, age, and human capital endowment [33]. Specifically for foreign investors, the effectiveness and stability of provincial governments are shown to be essential for the growth and output of their subsidiaries [35]. The importance of the provincial context is further underscored by findings that local historical legacies, urbanization, and labor mobility shape institutional impacts [36-38], and sector-specific studies also highlight this dynamic [6].

Regional and country-specific studies further corroborate the importance of institutional quality in attracting FDI, with consistent findings from diverse contexts [39]. Collectively, these empirical perspectives lead to significant policy implications. Recognizing the critical role of provincial institutions, policymakers are encouraged to look beyond national-level policies and prioritize the strengthening of local governance. This includes promoting transparent legal regimes and ensuring regulatory stability to both attract FDI and maximize its benefits [39]. As some research suggests, such targeted institutional reforms should precede aggressive FDI attraction policies to ensure optimal outcomes [31] and may even warrant a more selective approach to FDI attraction.

2.5. Economic and institutional determinants of FDI

The empirical literature identifies several key locational factors that influence a host country's ability to attract FDI. These can be broadly categorized into economic fundamentals and the quality of local institutions (Table 1).

Among economic fundamentals, market size is consistently highlighted as one of the most significant and robust determinants, as larger markets offer greater potential for sales and profits [40-42]. High-quality infrastructure is also noted as a critical factor, with good logistical infrastructure facilitating business operations, reducing costs, and significantly impacting FDI in emerging markets [43, 44]. The role of labor quality, however, shows more mixed results; some research suggests its impact can be sector-specific [45] while other studies indicate that a skilled workforce becomes a more important attractor in later investment stages as firms seek greater production efficiency and R&D capabilities [46].

Alongside economic fundamentals, the literature increasingly emphasizes the critical role of institutional and governance factors. Government effectiveness, which includes regulatory quality and bureaucratic efficiency, is crucial for creating a favorable investment climate and significantly impacts FDI flows into developing countries [44, 47]. The rule of law, ensuring legal certainty and the protection of property rights, is also essential for attracting FDI [44, 47, 48]. Closely related, effective corruption control enhances the attractiveness of a location by fostering a fair and predictable business environment, proving to be a significant determinant in emerging markets [44]. While less explicitly measured in quantitative studies, the importance of leadership dynamism is also recognized, as proactive leadership that implements favorable policies through strategic planning and place marketing can positively influence FDI attraction [49].

Table 1.
Description of Factors and Expected Impact.

No.	Factors	Impact	Expected Sign	Supporting Literature
1	Market Size	Larger markets offer greater potential for sales and profits and provide opportunities for economies of scale, thus attracting more FDI.	+	Andangnui, et al. [40]; Islam and Beloucif [41] and Wen, et al. [42]
2	Labor Quality	A skilled labor force enhances productivity, facilitates technology transfer, and supports higher value-added activities, attracting efficiency-seeking FDI projects.	+	Yin and Mingque [45] and Chen and Yeh [46]
3	Infrastructure	Good infrastructure reduces operational and transportation costs, improves supply chain efficiency, and connects firms to markets, thereby increasing a location's attractiveness.	+	Faria [43] and Paul and Jadhav [44]
4	Government Effectiveness	Government effectiveness reflects an efficient and predictable bureaucracy, which reduces transaction costs and operational uncertainties for investors.	-	Paul and Jadhav [44] and Buracom [47]
5	Corruption Control	Good corruption control creates a transparent and fair business environment, reduces the risk of informal costs, and strengthens investor confidence.	-	Paul and Jadhav [44]
6	Leadership Dynamism	Dynamic local leadership can lead to quicker resolution of bottlenecks and more responsive support policies, signaling a business-friendly environment.	+	Metaxas [49]
7	Rule of Law	A strong and predictable legal framework protects property rights and ensures contract enforceability, which is fundamental for minimizing long-term investment risks.	+	Paul and Jadhav [44], Buracom [47], and Adam [48]

3. Research Methodology

3.1. Empirical Model Specification

Grounded in the literature and empirical modeling frameworks developed by foundational studies on governance and investment [50, 51] and research on sub-national institutions in Vietnam [52], this study develops a panel data regression model to empirically evaluate the impact of provincial institutional quality on FDI inflows into Vietnam's Red River Delta region. The baseline model is specified as follows:

$$\ln(FDI_{it}) = \alpha + \beta_1\ln(QMTT_{it}) + \beta_2CLLD_{it} + \beta_3\ln(CSHT_{it}) + \beta_4CPTG_{it} + \beta_5CPKCT_{it} + \beta_6LDT_{it} + \beta_7TCPL_{it} + \varepsilon_{it}$$

Where:

$\ln(FDI_{it})$: Logarithm of total registered foreign direct investment capital in province *i* at year *t* (dependent variable);
$\ln(QMTT_{it})$: Logarithm of provincial population (proxy for market size);
$CLLD_{it}$: Proportion of trained labor force (proxy for human capital);
In $(CSHT_{it})$: Logarithm of freight volume transported through the province (proxy for infrastructure quality);
$CPTG_{it}$: PCI sub-index on time costs, reflecting government effectiveness;
$CPKCT_{it}$: PCI sub-index on informal charges, representing corruption control;
LDT_{it}: PCI sub-index on local leadership proactivity, indicating the quality of local regulation;
$TCPL_{it}$: PCI sub-index on legal institutions, reflecting the rule of law;
εitεit: Error term capturing unobserved province-year specific shocks.

The choice of institutional variables is informed by the Kaufmann–Kraay–Zoido–Lobatón (KKZ) framework [4], which underlies the World Bank's Worldwide Governance Indicators (WGI). While the WGI framework offers broad national-level indicators of institutional governance – including voice and accountability, political stability, government effectiveness, regulatory quality, rule of law, and control of corruption – this study adapts the framework to the provincial context in Vietnam through the use of sub-indices from the PCI.

Each of the four PCI components used in this study corresponds conceptually with a dimension of the WGI institutional framework:

- CPTG (Time Costs) → Government Effectiveness: captures administrative efficiency in investment and licensing procedures;
- CPKCT (Informal Charges) → Control of Corruption: assesses the prevalence of unofficial payments in accessing public services;
- LDT (Proactive Leadership) → Regulatory Quality: reflects the strategic vision and reform orientation of local authorities;
- TCPL (Legal Institutions) → Rule of Law: measures the fairness, predictability, and consistency of legal enforcement.

These PCI sub-indices are selected based on their empirical validity, consistent annual coverage across provinces, and close alignment with theoretical constructs of institutional quality at the subnational level. The inclusion of conventional economic control variables, market size, labor quality, and infrastructure, ensures that the model accounts for both institutional and non-institutional determinants of FDI.

3.2. Data and Variables

The specific variables included in the model are explained in Table 2.

Table 2.
List of Model Variables and Expected Signs.

No.	Variable Name	Description	Unit	Expected Sign	Data Source
A. Dependent Variable					
LnFDI		Logarithm of total registered FDI capital	–	–	Foreign Investment Agency (FIA)
B. Independent Variables					
1	LnQMTT	Logarithm of population	–	+	General Statistics Office (GSO)
2	CLLĐ	Proportion of trained labor force	%	+	GSO
3	LnCSHT	Logarithm of freight volume passing through the locality	–	+	GSO
4	CPTG	PCI sub-index score: Time costs (proxy for government effectiveness)	Score	-	VCCI
5	CPKCT	PCI sub-index score: Informal charges (proxy for corruption control)	Score	-	VCCI
6	LĐT	PCI sub-index score: Proactivity of provincial leadership	Score	+	VCCI
7	TCPL	PCI sub-index score: Legal institutions (proxy for rule of law)	Score	+	VCCI

Source: Author's compilation based on literature review and model specification.

Each of these variables is selected to reflect both institutional and structural conditions at the provincial level, consistent with the empirical model in section 3.1.

4. Research Findings

4.1. Descriptive Statistics

This study utilizes a panel dataset covering 11 provinces in the Red River Delta region over the period from 2009 to 2023, yielding a total of 165 province-year observations. Table 3 summarizes the descriptive statistics for all variables included in the regression analysis, encompassing both economic fundamentals and institutional quality indicators.

The dependent variable, LnFDI the natural logarithm of registered foreign direct investment capital has a mean value of 5.82 and a standard deviation of 1.48. The wide dispersion indicates substantial variation in FDI inflows across provinces and over time. The minimum and maximum values of 1.25 and 9.04, respectively, suggest that certain provinces received consistently higher levels of foreign investment, while others attracted minimal capital, highlighting unequal regional attractiveness to foreign investors.

Table 3.
Descriptive Statistics of Model Variables.

Variable	Observations	Mean	Std. dev.	Min.	Max.
LnFDI	165	5.816	1.484	1.253	9.042
LnQMTT	165	7.366	0.571	6.667	9.058
CLLD	165	24.84	9.345	10.80	50.80
LnCSHT	165	8.080	1.068	5.671	10.597
CPKCT	165	6.191	0.932	4.211	8.100
CPTG	165	6.823	0.972	3.570	8.930
TCPL	165	5.883	1.282	2.560	8.501
LDT	165	5.527	1.376	1.390	8.236

The proxy for market size, LnQMTT (log of provincial population), exhibits a relatively narrow range, with a mean of 7.37 and a standard deviation of 0.57. This suggests that population sizes among the provinces in the sample are broadly comparable, with limited demographic variation. In contrast, CLLD (proportion of trained labor) displays a mean of 24.84% and a high standard deviation of 9.35, indicating substantial heterogeneity in labor quality across provinces. This variation underscores the importance of human capital as a differentiating factor in FDI attraction.

Regarding infrastructure capacity, LnCSHT (log of freight volume passing through the locality) reports a mean of 8.08 and a standard deviation of 1.07. These values suggest moderate variation in transport and logistics infrastructure, which could play a role in explaining disparities in investor interest across provinces.

Turning to the institutional quality variables – proxied by sub-indices from the Provincial Competitiveness Index (PCI), the results confirm meaningful inter-provincial differences. CPKCT (informal charges), representing corruption control, has a mean value of 6.19 and a standard deviation of 0.93, while CPTG (time costs), serving as a proxy for government effectiveness, has a mean of 6.82 with a similar dispersion (SD: 0.97). These figures point to moderate institutional variance in administrative efficiency and rent-seeking behavior among localities.

TCPL, which captures the quality and reliability of legal institutions (rule of law), has a slightly higher standard deviation of 1.28, signaling varying degrees of legal transparency and enforcement. The most dispersed variable among the institutional indicators is LDT (leadership dynamism), which reflects the proactivity and reform orientation of provincial governments. With a mean of 5.53 and a standard deviation of 1.38, the data imply that while some provinces demonstrate strong leadership and forward-thinking governance, others remain less active in policy reform and investor facilitation.

Overall, the descriptive statistics confirm considerable heterogeneity across provinces in both structural economic variables and dimensions of institutional quality. This variation provides empirical justification for investigating how localized conditions influence FDI distribution. The observed disparities also reinforce the relevance of subnational analysis in understanding investment behavior in the Vietnamese context.

4.2. Regression Results

To provide a baseline assessment of the relationship between institutional quality and FDI inflows at the subnational level, this study employs a Pooled Ordinary Least Squares (OLS) regression model. The analysis is conducted on a balanced panel dataset comprising 165 province-year observations from 11 provinces in Vietnam's Red River Delta region, covering the period 2009–2023. The estimated results are reported in Table 4.

Table 4.
OLS Regression Results.

Dependent variable: LnFDI	Coefficient	Std. Error	t-value	p-value	95% Confidence Interval
LnQMTT (Market Size)	0.6944***	0.2328	2.98	0.003	0.2345 to 1.1542
CLLD (Labor Quality)	0.0735***	0.0127	5.80	0.000	0.0484 to 0.0985
LnCSHT (Infrastructure)	- 0.2403**	0.1087	- 2.21	0.028	- 0.4550 to - 0.0257
CPKCT (Informal Costs)	- 0.3686***	0.1157	- 3.19	0.002	- 0.5971 to - 0.1400
CPTG (Time Costs)	- 0.2939**	0.1289	-2.28	0.024	- 0.5486 to - 0.0392
TCPL (Legal Institutions)	0.1410	0.1013	1.39	0.166	- 0.0591 to 0.3410
LDT (Leadership Dynamism)	0.3987***	0.1069	3.73	0.000	0.1875 to 0.6099
_cons	2.0720	1.7296	1.20	0.233	- 1.3444 to 5.4883

- R-squared: 0.4529
- Prob > F: 0.0000

Note: (*): significant at 10%; (**): significant at 5%; (***): significant at 1%

The regression model demonstrates significant overall explanatory power. The F-test statistic is highly significant (Prob > F = 0.0000), rejecting the null hypothesis that all regression coefficients are jointly equal to zero. This indicates that the model is statistically valid as a whole and provides a meaningful explanation of the variation in FDI inflows across provinces.

The R-squared value of 0.4529 suggests that approximately 45.29% of the variation in the dependent variable (log of FDI inflows) can be explained by the set of independent variables included in the model. Given the complexity of FDI determinants and the diversity of subnational contexts, this is considered a moderately strong level of explanatory power in applied regional studies.

As shown, several independent variables are statistically significant at conventional confidence levels, with both expected and unexpected coefficient signs. The interpretation of these coefficients, particularly in relation to institutional quality indicators such as time costs (CPTG), informal charges (CPKCT), leadership dynamism (LDT), and legal institutions (TCPL), will be elaborated further in the following Discussion section.

5. Discussion

The regression results provide significant empirical insights into the determinants of FDI at the subnational level in Vietnam, revealing a nuanced interplay between economic fundamentals and provincial institutional quality. This section discusses these findings, interpreting them within the context of the theoretical frameworks and empirical literature reviewed earlier.

First, the analysis confirms the continued importance of traditional economic pull factors. The positive and highly significant coefficient of Market Size (LnQMTT) aligns with the market-seeking motive for FDI, a core component of Dunning's 2008 OLI paradigm [16] and is consistent with extensive empirical evidence identifying market size as a primary determinant [41, 42]. This suggests that even in a globalized economy, the potential for local sales remains a fundamental driver for investment in the Red River Delta. Similarly, Labor Quality (CLLD) emerges as a strong, positive determinant. This supports the notion that human capital is complementary to FDI, enhancing absorptive capacity for new technologies and enabling higher productivity [53]. As firms in the region move up the value chain, a skilled workforce becomes a critical asset [46].

However, the findings for other variables, particularly infrastructure and institutional quality, reveal a more complex picture. The counterintuitive negative coefficient for Infrastructure (LnCSHT), which diverges from some traditional findings [44] suggests that the sheer volume of freight may not be an adequate proxy for its quality or effectiveness. It is plausible that high freight volume in the densely populated Red River Delta reflects logistical congestion and bottlenecks rather than efficient connectivity. This could also point to a mismatch between the type of existing infrastructure and the specific needs of modern foreign investors, a risk highlighted in the literature where poorly planned infrastructure can even crowd out private investment [54].

The results for the institutional variables strongly underscore the centrality of subnational governance. The significant negative coefficients for Time Costs (CPTG) and Informal Costs (CPKCT) confirm that bureaucratic inefficiency and corruption are major deterrents to FDI. This aligns with a vast body of cross-country evidence suggesting that investors are increasingly sensitive to transaction costs and the risks associated with opaque administrative procedures and rent-seeking behavior [44, 55]. While some older studies proposed a "grease the wheels" hypothesis for corruption [56], our findings indicate that in the contemporary Vietnamese context, foreign investors prioritize transparency and predictability.

Perhaps the most compelling finding is the contrast between the highly significant, positive impact of Leadership Dynamism (LDT) and the non-significance of the formal Rule of Law (TCPL). This suggests that in an environment where formal legal frameworks may be perceived as relatively uniform or slow to change across provinces, foreign investors place greater weight on the quality and responsiveness of local implementation. Proactive and flexible provincial leadership likely acts as a credible signal of a pro-business environment, assuring investors that administrative hurdles will be resolved efficiently and that the government is a reliable partner [49]. The lack of a significant effect for TCPL does not imply that the rule of law is unimportant, but rather that, at the provincial level, its practical effectiveness may be better captured by the actions of local leaders than by the formal legal index itself. This is consistent with literature emphasizing the long-term necessity of robust legal institutions [50] but recognizing the immediate impact of local governance quality.

In conclusion, these findings reinforce the view that FDI attraction in a decentralized economy like Vietnam is not merely about market access or cheap labor. It is increasingly about the quality of local governance. For the Red River Delta, the key differentiator among provinces appears to be the efficiency, transparency, and proactiveness of their leadership and administration. This suggests that policy interventions must be targeted at the provincial level, focusing on alleviating specific governance bottlenecks to create a truly competitive investment climate.

6. Conclusion

An analysis of FDI inflows into Vietnam's Red River Delta from 2009 to 2023 offers pertinent insights into the role of provincial-level institutional quality. By disaggregating institutional quality into distinct dimensions, this research contributes to understanding the specific subnational factors that appear to matter most to investors, moving beyond broad national-level determinants.

The findings suggest that while traditional economic fundamentals like market size and labor quality retain their importance as positive determinants for FDI, the quality of local governance emerges as a critical differentiating factor. Specifically, the results indicate that institutional weaknesses, which directly impact business operations such as prolonged administrative procedures (Time Costs) and the prevalence of unofficial payments (Informal Charges) act as significant deterrents to investment in this context.

A particularly noteworthy observation is the contrast between formal and informal institutional mechanisms. While formal legal institutions (Rule of Law) did not yield a statistically significant effect in this model, the informal, proactive quality of local governance (Leadership Dynamism) was strongly and positively associated with FDI. This may imply that in an environment where formal legal frameworks are perceived as relatively uniform, investors place considerable weight on the demonstrated effectiveness and responsiveness of local leaders as a key signal of a stable and supportive investment climate. The counterintuitive negative association found with the infrastructure proxy also suggests that for investors, the qualitative aspects and alignment of infrastructure with their specific needs might be more crucial than quantitative measures of volume.

These observations may hold valuable considerations for policy. For a region like the Red River Delta, efforts to attract and upgrade FDI could benefit from a focus that extends beyond macro-level reforms to encompass tangible improvements in the provincial operational environment. This includes potentially streamlining administrative processes, enhancing transparency to mitigate informal charges, and fostering a consistently proactive and problem-solving approach among local leadership.

This research also naturally points towards several avenues for further investigation. The unexpected finding on infrastructure warrants future studies employing more nuanced, quality-based indicators. Additionally, qualitative research could provide deeper insights into the specific mechanisms through which 'leadership dynamism' translates into investor confidence, complementing the quantitative findings presented here. Finally, comparative studies examining other economic regions within Vietnam, with their distinct institutional histories and development trajectories, could further illuminate the interplay between formal and informal governance in shaping FDI patterns.

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