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Determinants of propensity to intensify the cooperation among local governments in FDI promotion: The case of Northern Key Economic Zone of Vietnam

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ABSTRACT

This study investigates the determinants of cooperation intensity among local governments in promoting Foreign Direct Investment (FDI) within Vietnam's Northern Key Economic Zone (KEZ), which is emerging as a critical hub for FDI but faces significant disparities in FDI distribution across its provinces. The study applies the Institutional Collective Action (ICA) Framework. It is complemented by the Theory of Planned Behavior (TPB) and Risk Aversion Theory to form a comprehensive understanding of how gaps in perception and expectation of benefits, costs, and risks shape cooperative decisions. The findings indicate that while the gap between perception and expectation of benefits and transaction costs does not significantly impact the propensity to intensity of the cooperation, the gap of risks of collaboration is a key determinant. This research emphasizes the need for coordinated strategies to mitigate risks and enhance trust among local governments, offering actionable insights for policymakers to foster more effective intergovernmental collaboration, ultimately optimizing resource allocation and boosting FDI attraction.

Keywords: Local government; Foreign Direct Investment (FDI); Northern zone; Propensity; Theory of Planned Behavior (TPB).

1. Introduction

Foreign Direct Investment (FDI) is a critical driver of economic growth, particularly in developing countries. It fosters industrial development, enhances workforce quality through training, and integrates host countries into global economic networks (OECD, 2008; Ozturk, 2007). As a transformative force, FDI not only brings capital but also facilitates technological transfer, modern management practices, and access to international markets.

Vietnam, as a rapidly growing economy, has experienced significant FDI inflows, with the Northern Key Economic Zone (KEZ) serving as a focal point. This region, accounting for 33.89% of FDI registered capital and 32.13% of FDI projects nationwide in 2022, has emerged as a key hub for investment. However, the distribution of FDI across the seven provinces in the KEZ reveals disparities. Major cities like Hanoi, Haiphong, and Bac Ninh dominate, while others such as Hung Yen, Vinh Phuc, and Quang Ninh lag behind, highlighting inefficiencies in FDI promotion. This uneven distribution underscores the need for a coordinated and cooperative approach among local governments to optimize resource utilization, policy harmonization, and infrastructure development, thereby creating a more favorable environment for FDI.

Institutional Collective Action (ICA) dilemmas, as described by Feiock (2013), arise from fragmented governance systems where the decisions of one government affect others. This framework provides valuable insights into the challenges of collaboration among autonomous local governments. Cooperation intensity is influenced by factors such as institutional characteristics, economic diversity, and externalities associated with fragmented decision-making (Kim et al., 2020; Feiock, 2009). Studies have shown that cooperative mechanisms, ranging from informal networks to formal agreements, can mitigate these dilemmas by reducing transaction costs, aligning incentives, and fostering trust among stakeholders. In the context of the KEZ, the application of the ICA framework is particularly relevant. The region's economic potential is constrained by fragmented governance, which hinders

collective action in promoting FDI. While individual provinces may pursue their own strategies, the lack of synergy often leads to inefficiencies and missed opportunities. Therefore, understanding the determinants of cooperation intensity among local governments is crucial for enhancing the region's attractiveness to foreign investors. By identifying these determinants, policymakers can design targeted interventions to strengthen collaboration, optimize resource allocation, and ensure equitable development across the KEZ.

This study aims to fill the gap in the literature by developing a conceptual model and hypotheses on the determinants of cooperation intensity among local governments in FDI promotion within the KEZ. Grounded in the ICA framework, this research seeks to provide actionable insights for fostering effective intergovernmental collaboration in Vietnam's economic development strategy.

2. Conceptual Framework

Understanding the determinants of cooperation intensity among local governments in attracting foreign direct investment (FDI) is essential for enhancing regional economic development. The following section critically discusses these frameworks and their relevance to the study.

2.1. Theoretical Background

The theoretical foundation of this study is built upon three primary frameworks: the Institutional Collective Action (ICA) framework, the Theory of Planned Behavior (TPB), and the risk aversion framework. These frameworks provide a comprehensive understanding of how local governments make cooperative decisions in the context of foreign direct investment (FDI) promotion. Recent literature has further refined these theories by integrating elements of institutional flexibility, transparency, and perceived behavioral control, all of which are critical in shaping cooperation dynamics among local governments (Kim et al., 2020; Nascimento et al., 2022).

(i) Institutional Collective Action Framework

The institutional collective action (ICA) framework offers a robust lens for analyzing cooperation among local governments. Feiock (2013) defines collective action as voluntary, coordinated activities undertaken by groups to achieve shared interests. This framework synthesizes theories of collective action, transaction cost economics, public economy models, and social network theories, providing a comprehensive understanding of the mechanisms driving cooperation.

In the context of FDI attraction, local governments face challenges related to resource allocation, policy alignment, and risk management. The ICA framework posits that cooperation intensity depends on three key gaps:

(a) Expected and Perceived Benefits: Cowen and Sutter (1999) argue that when the perceived benefits of cooperation outweigh expectations, governments are more likely to intensify collaborative efforts. For example, localities with greater access to investment capital tend to lead cooperative initiatives, as they stand to gain more from shared resources.

(b) Expected and Perceived Costs: Jung and Kim (2009) emphasize the significance of transaction costs in shaping cooperation intensity. High costs associated with coordination, monitoring, and enforcement can deter

governments from forming alliances. Conversely, reducing these costs through streamlined processes and clear agreements can enhance collaboration.

(c) Expected and Perceived Risks: Shrestha and Feiock (2011) highlight the role of risk perception in determining cooperative behaviors. Governments are more inclined to cooperate when they can mitigate risks through formal agreements, trust-building measures, and reciprocal exchanges. Steinacker (2004) underscores that unresolved conflicts over benefit distribution often hinder cooperative efforts, necessitating equitable frameworks for resource sharing.

Berardo and Scholz (2010) further argue that institutional structures significantly influence cooperation intensity by shaping the incentives and constraints faced by governments. Trust, reciprocity, and accountability are critical for sustaining collaborative efforts, particularly in the context of FDI, where the stakes and uncertainties are high.

(ii) Theory of Reasoned Action and Theory of Planned Behavior

In the context of FDI attraction, TRA and TPB highlight the role of attitudes, beliefs, and perceptions in shaping cooperative behaviors. Local governments prioritize projects directly contributing to GDP growth, as their performance is often evaluated based on economic outcomes. Ajzen's (1991) inclusion of behavioral control is particularly relevant, as it accounts for the external barriers and facilitators influencing cooperation. For example, the availability of financial resources, administrative capacity, and stakeholder support significantly affect governments' ability to engage in collaborative initiatives.

Gerber and Gibson (2005) argue that perceived gaps between expected and actual benefits or costs influence cooperation intensity. Local governments are motivated to collaborate when they perceive that the benefits outweigh the associated costs and risks. However, McGuire (2005) cautions that high transaction costs and perceived risks can deter cooperation, underscoring the need for mechanisms to manage these challenges effectively.

(iii) Risk Aversion Framework

Risk aversion theory provides additional insights into the determinants of cooperation intensity. Bernoulli (1954) introduced the concept of diminishing marginal utility, suggesting that individuals and organizations prioritize decisions with lower risk and higher certainty. Kahneman and Tversky's (1979) prospect theory extends this by emphasizing that decision-makers are more sensitive to potential losses than equivalent gains.

Risk aversion manifests in several ways in the context of local government cooperation. Steinacker (2004) notes that dispute over benefit distribution and uncertainties in cooperative outcomes often deter governments from engaging in joint initiatives. Brown and Potoski (2005) identify factors such as information asymmetry, coordination challenges, and trust deficits as significant barriers to cooperation.

By synthesizing these theoretical perspectives, this study provides a robust framework for analyzing the determinants of cooperation intensity among local governments. The findings have practical implications for policymakers and practitioners seeking to enhance regional economic development through collaborative efforts in FDI attraction.

2.2. Conceptual Model and Hypotheses

This study aims to analyze the determinants of cooperation intensity among local governments in promoting foreign direct investment (FDI). The conceptual model is developed based on the Institutional Collective Action (ICA) framework (Feiock, 2009, 2013), the Theory of Planned Behavior (TPB) (Ajzen, 1991), and the risk aversion framework (Kahneman & Tversky, 1979).

The model assumes that the propensity to intensify cooperation among local governments is influenced by three key gaps: **(1) the gap between expected and perceived cooperation benefits, (2) the gap between expected and perceived cooperation transaction costs, and (3) the gap between expected and perceived cooperation risks.** These gaps reflect discrepancies in local governments' expectations and actual experiences, which can significantly impact their willingness to cooperate.

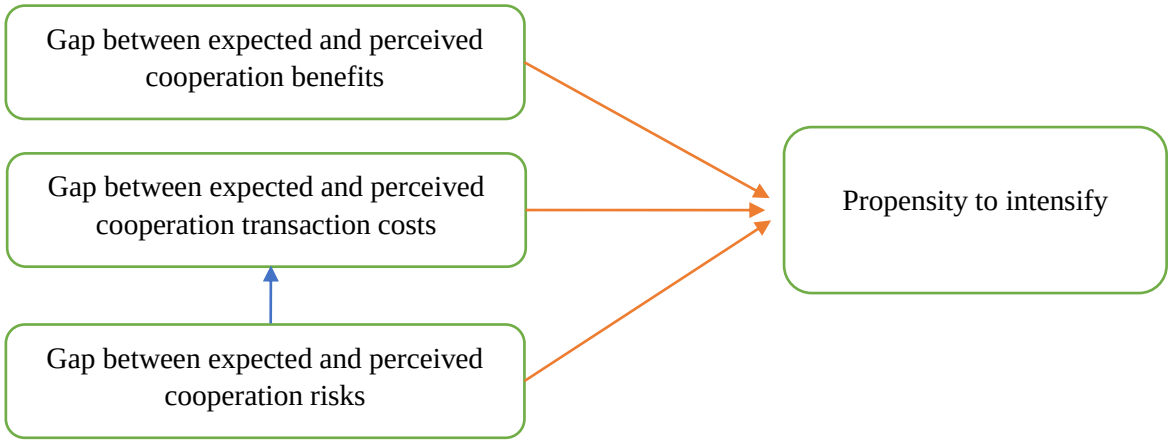

Figure 1. Conceptual model on the determinants of propensity to intensity the cooperation of local governments in FDI promotion

The conceptual model depicting the relationships among these variables as follows.

Gap between expected and perceived cooperation benefits (BGap): Local governments assess cooperation based on expected economic and strategic benefits. When perceived benefits fall short of expectations, governments may still choose to intensify collaboration to compensate for the shortfall. Recent research suggests that local governments not only evaluate financial gains but also consider policy alignment and reputational benefits in their cooperation decisions (Kim et al., 2020; McGuire, 2022).

Gap between expected and perceived cooperation transaction costs (CGap): Cooperation entails administrative, financial, and opportunity costs. If perceived transaction costs exceed expectations, governments are less likely to engage in cooperative efforts. Steinacker (2023) highlights that institutional inefficiencies, bureaucratic burdens, and loss of autonomy can increase transaction costs and deter cooperation.

Gap between expected and perceived cooperation risks (RGap): Governments assess risks associated with collaboration, including political uncertainty, coordination challenges, and uneven benefit distribution. Xin and Chen (2023) emphasize that perceived risks are magnified in environments with low transparency and inconsistent policy frameworks, yet in some cases, a greater gap between expected and perceived risks may drive governments to cooperate as a risk mitigation strategy.

The conceptual model establishes the foundation for understanding how discrepancies between expected and perceived cooperation benefits, transaction costs, and risks influence local governments' decision-making in fostering FDI. Based on insights from the theoretical frameworks and recent literature, the following hypotheses are developed to empirically test these relationships.

H1: The greater the gap between the expected benefits and the perceived current benefits of cooperation, the more likely a local government will intensify its cooperation with other governments in investment promotion

Gerber and Gibson (2005) posit that when local governments recognize a disparity between expected and perceived benefits generated from cooperation—such as through FDI promotion—they are motivated to pursue collaborative actions. LeRoux and Carr (2007) echo this sentiment, suggesting that governments with insufficient resources often partner with higher-tier governments to gain access to resources and thereby bridge the gap between expected and perceived benefits.

H2: The smaller the gap between the expected transaction costs and the perceived current transaction costs, the more likely a local government will intensify its cooperation with other governments in investment promotion

Economic theories suggest high transaction costs discourage intergovernmental cooperation (Cowen & Sutter, 1999). Steinacker (2023) reinforces this by showing that unclear administrative processes and enforcement mechanisms exacerbate perceived costs. Nascimento et al. (2022) highlight that structured institutional frameworks and transparency mechanisms can help mitigate transaction costs, thereby fostering cooperation.

H3: The greater the gap between the expected cooperation risks and the perceived current risks, the more likely a local government will intensify its cooperation with other governments in investment promotion

Risk aversion theory suggests decision-makers are more sensitive to potential losses than equivalent gains (Kahneman & Tversky, 1979). Recent empirical studies (Xin & Chen, 2023) show that perceived risks, particularly regarding policy instability and regulatory fragmentation, may, in some cases, encourage cooperation as local governments seek to mitigate uncertainties through collective action.

H4: The greater the gap between expected and perceived cooperation risks, the greater the gap between expected and perceived transaction costs

Risk perception and transaction costs are interrelated (Arrow, 1970; Shrestha & Feiock, 2011). When governments perceive high risks, they often allocate additional resources to monitoring, enforcement, and contingency planning, thereby increasing transaction costs. Recent findings confirm that transparency and trust-building mechanisms can help reduce both perceived risks and associated costs, enhancing cooperation prospects (Nascimento et al., 2022).

3. Research Design

Over nearly three decades of economic reform and openness, Vietnam's economy, including the Northern Key Economic Zone (KEZ), has achieved significant milestones. However, the region continues to face challenges,

particularly in maintaining stable economic growth. The Northern KEZ's localities have not established strong collaborative linkages in promoting foreign direct investment (FDI). Instead, many provinces engage in intense competition to attract investment in key industries such as hospitality, cement, real estate, sugar, shipbuilding, steel, seaport upgrading, mining, and construction. This fragmented approach has limited the region's ability to optimize resources and create a cohesive investment environment. Without targeted measures to improve FDI attraction, the economic growth rate of the Northern KEZ—and Vietnam as a whole—may remain constrained. Consequently, enhancing local cooperation in attracting foreign capital is crucial, alongside policy and institutional reforms at the regional level. This context underscores the relevance of an empirical investigation into the determinants of cooperation intensity among local governments in a developing country setting.

The research process adopted in this study is structured into three main stages: (i) interest and hypothesis development, (ii) scale development and measurement, and (iii) hypothesis testing and discussion.

Stage 1: Interest and Hypothesis Development: The first stage involves defining research objectives and developing hypotheses based on theoretical frameworks and existing literature. The hypotheses are designed to address the factors influencing the intensity of intergovernmental cooperation in FDI promotion.

Stage 2: Scale Development and Measurement. In the second stage, appropriate measurement scales are selected based on the research objectives. These include nominal, ordinal, interval, or ratio scales, depending on the nature of the variables. A questionnaire is then drafted to collect data from participants, who consist of government officials from the Northern KEZ provinces (Hanoi, Vinh Phuc, Bac Ninh, Hai Duong, Haiphong, and Hung Yen).

The collected data are subjected to Exploratory Factor Analysis (EFA) to assess the validity of the scales and ensure that the observed variables accurately represent the latent constructs. Additionally, the reliability of the scales is tested using Cronbach’s alpha to confirm the internal consistency of the measurements. This step ensures that the variables are interrelated and that the observed variables within each factor are strongly correlated.

Stage 3: Hypothesis Testing and Discussion. In the final stage, the Structural Equation Modeling (SEM) method is applied to test the hypotheses and evaluate the relationships among variables. SEM enables the analysis of complex relationships between observed and latent variables while accounting for measurement errors. The results are then interpreted in the context of the research objectives, and a discussion is conducted to derive meaningful insights and policy implications.

This structured approach provides a robust framework for analyzing the determinants of cooperation intensity among local governments, offering valuable evidence to inform policy interventions aimed at enhancing regional economic integration and FDI attraction.

Survey

This survey targets public administrators working in government agencies responsible for investment mobilization, including Foreign Direct Investment (FDI) attraction, in the Northern Key Economic Zone of Vietnam. The survey aimed for a sample size of at least 250 respondents, following statistical guidelines like the Rule of 5 (subjects-to-variables ratio should be no lower than 5) and the Rule of 200 (at least 200 responses). Due to the small

target population, convenience sampling was used, and 305 questionnaires were distributed. Local government agencies helped circulate the questionnaires, ensuring a reasonable response rate. The survey was conducted between January and August 2022, yielding 282 responses. Of these, 252 responses were complete, including both structural items and personal information, while the remaining responses were incomplete in some sections. The collected data will be used to build measurement models and test hypotheses related to the factors influencing cooperation in FDI promotion in the region.

Table 1. EFA of determinants of intensity of cooperation

Statistic		**Value**
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.911
Bartlett's Test of Sphericity	Approx. Chi-Square	3717.533
	Df	136
	Sig.	.000

The last column of Cronbach's Alpha if Item Deleted presents the value that Cronbach's alpha would be if that particular item is deleted from the scale. All values listed in this column are smaller than .876, meaning that the removal of any item would result in a lower Cronbach's alpha.

Concerning the variable of Expected Costs, the Cronbach's alpha of overall measurement scale of this variable is .936, and if deleting any item from the scale don't result the higher value of Cronbach's Alpha. So, the measurement scale has high internal consistency, and we don't need improve this scale because it is of acceptable reliability.

Concerning the variable of Expected Risks, the reliability of the measurement scale of Expected Risks is desirable due to the hint from a very high value of Cronbach's alpha (0.937). We do not find significant contribution of eliminating any item because of removing these items in conducting measurement scale of Expected Risks would result in no higher value of Alpha Score.

Table 2. Testing reliability of determinants of cooperation intensity

	Scale Mean if Item Deleted	**Scale Variance if Item Deleted**	**Corrected Item-Total Correlation**	**Squared Multiple Correlation**	**Cronbach's Alpha if Item Deleted**
Gap of Benefits					
bgap101	7.0000	21.559	.664	.495	.858
bgap102	7.0952	21.932	.660	.500	.859
bgap103	6.9853	22.081	.705	.515	.852
bgap104	7.0110	21.246	.704	.539	.851
bgap105	6.9853	20.956	.717	.561	.849
bgap106	7.1209	22.313	.639	.430	.862
Cronbach's Alpha					.876

Gap of Costs					
cgap101	-.8462	54.094	.798	.687	.932
cgap102	-.7436	54.074	.813	.695	.931
cgap103	-.8535	52.324	.831	.715	.928
cgap104	-.7656	51.482	.879	.780	.922
cgap105	-.8681	52.777	.821	.721	.930
cgap106	-.9048	53.616	.787	.684	.934
Cronbach's Alpha					.941
Gap of Risks					
rgap101	-1.2674	33.866	.797	.656	.942
rgap102	-1.4029	33.271	.871	.763	.929
rgap103	-1.3590	33.679	.878	.777	.928
rgap104	-1.3480	33.037	.852	.741	.932
rgap105	-1.2894	33.545	.858	.759	.931
Cronbach's Alpha					.945

4. Research Findings and Discussions

In this study of determinants of propensity to intensify, no change will be made to the conceptual model after EFA factoring and testing, as there are no changes in the dimensions of the variables of the model.

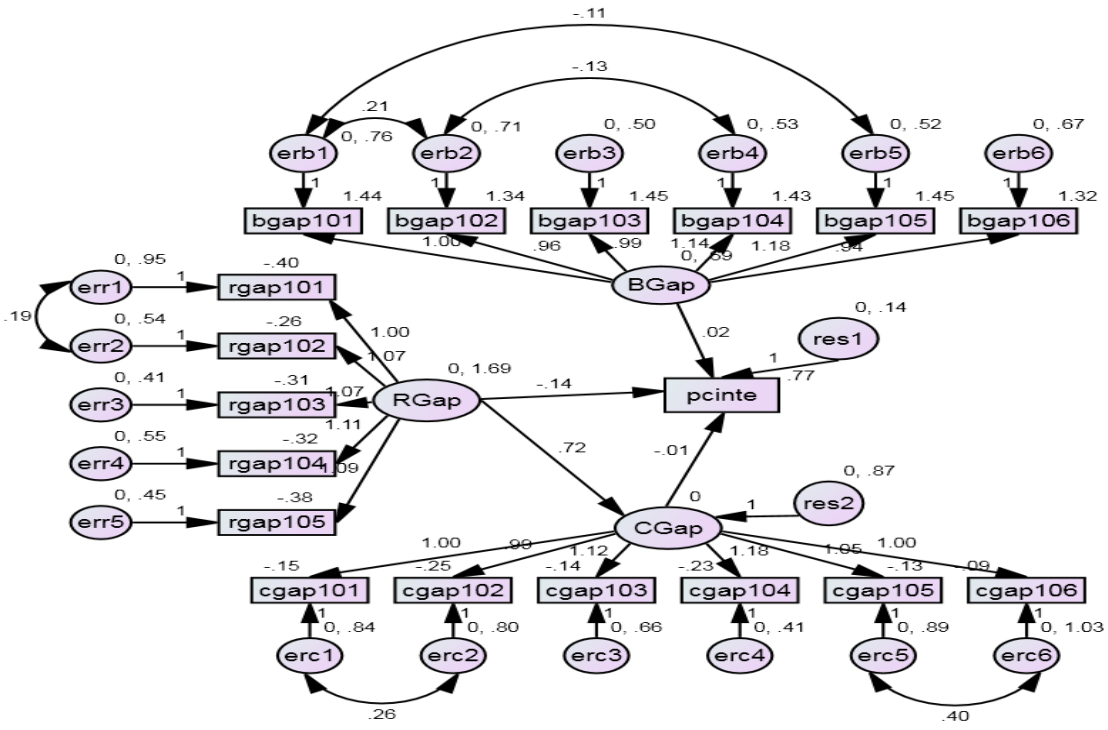

Figure 2. Research model estimated on the determinants of propensity to intensify the cooperation among local governments

The research model includes 4 variables. In which, three independent variables are (1) BGap - Gap between expected and perceived cooperation benefits, (2) CGap - Gap between expected and perceived cooperation transaction costs; and (3) RGap - Gap between expected and perceived cooperation risks; the dependent variable is pcinte – Propensity to intensity. We run the regression and modify relationships in the model for the sake of acceptable goodness-of-fit with the guides from Modification Indices and get the final results illustrated in Table 3 and Table 4 that display the parameter estimates of the structural model with test statistics.

Table 3. Fit summary of research model estimated on determinants of propensity to intensify the cooperation among local governments

Index	Value	Implication
CMIN	185.329	Good fit
DF	126	
P value	0.000	
CMIN/DF	1.471	Acceptable
RMSEA	0.042	Close fit
P value for test of close fit (RMSEA<.05)	0.862	Good fit
NFI	0.952	Good fit
CFI	0.984	Good fit
RFI	0.942	Good fit
IFI	0.984	Good fit
TLI	0.981	Good fit

Note. AGFI = Adjusted Goodness-of-Fit-Index, AIC = Akaike Information Criterion, CAIC = Consistent AIC, CFI = Comparative Fit Index, ECVI = Expected Cross Validation Index, NFI = Normed Fit Index, RMSEA = Root Mean Square Error of Approximation, SRMR = Standardized Root Mean Square Residual, RFI = Relative Fit Index, IFI = Incremental Fit Index, TLI = Tucker - Lewis Index.

We use techniques of confirmatory factor analysis in structural equation modeling as the statistical method for the tests of structural relationships as well as of the difference of the effects among groups of work place and work type of public administrators.

For assessing the validity of research hypotheses, we summarize the regression results in Table 4 Specifically, we find that:

Table 4. Regression results on the relationship of variables in research model estimated on the determinants of propensity to intensify the cooperation among local governments

			Estimate	S.E.	C.R.	P
CGap	<---	RGap	0.715	0.065	10.945	***
Pcinte	<---	BGap	0.02	0.029	0.693	0.488

Pcinte	<---	CGap	-0.007	0.027	-0.261	0.794
Pcinte	<---	RGap	-0.141	0.028	-5.072	***

*** Statistically significant at the 1% level; ** statistically significant at the 5% level; * statistically significant at the 10% level

Hypothesis H1: The regression results indicate an insignificant relationship between the propensity to intensify the cooperation (pcinte) and the Gap between expected and perceived cooperation benefits (BGap). So, *the hypothesis H1 is not supported.*

This finding is consistent with previous studies, such as those by Vissak and Roolaht (2005), Axelrod and Keohane (1985), Durham (2010), and Brierly (2004), which also observed weak or insignificant relationships between these variables. However, this result contrasts with studies by Feiock (2013), Gerber and Gibson (2005), LeRoux and Carr (2007), and Cowen and Sutter (1999), who reported stronger connections between the factors.

The regression results are also consistent with the current situation in Vietnam's Northern Key Economic Zone (NKEZ), which has a favorable geographical location with many sea ports, border gates, and inter-regional roads, offering substantial economic development advantages and FDI potential. Furthermore, the region has strengths in technology, skilled labor, and high-quality services. Currently, the region is experiencing a surplus of industrial products and supplies large quantities of goods to the entire country. This abundance of resources discourages local governments from cooperating with each other, as each locality prioritizes enhancing its own competitiveness. With full capacity, each locality focuses on making its own cost estimates and applying for funding independently, without seeking to share investment sources with others. As a result, the gap between expected and perceived cooperation benefits does not have a significant effect on the cooperation propensity among local governments.

The study by Nguyen Quoc Viet et al. (2014) on institutional quality and FDI attraction in Vietnam revealed that institutional factors such as transparency, accountability, and management effectiveness are crucial in determining the ability of local governments to attract FDI. When local governments lack trust in the institutional frameworks of neighboring areas or perceive high risks in cooperation, they are less inclined to engage in collaborative efforts. This aligns with the idea that perceived cooperation risks can act as a barrier to FDI attraction, supporting the notion that risk perception plays a key role in the intensity of intergovernmental cooperation.

Nguyen Hiep and Phan Van Toan (2015) showed that while local governments are aware of the benefits of regional cooperation in attracting FDI, the actual level of cooperation remains low. This stems from ambiguity in the perception of benefits—although leaders perceive that cooperation can bring benefits, those benefits have not been clearly quantified. Therefore, hypothesis H1 may not hold if the expected benefits are not clear or compelling enough to motivate cooperation.

Nguyen Xuan Vinh (2020) identified trust and shared benefits as critical factors driving cooperation among stakeholders. Although this study focused on the tourism sector, its findings are applicable to intergovernmental cooperation in FDI attraction. When local governments lack trust in each other or fail to recognize the shared benefits of cooperation, they are less likely to engage in collaborative efforts.

Nguyen Thi My Le and Pham Van Hung (2020) examined the intergovernmental linkages within Vietnam's Central Economic Region, focusing on Binh Dinh Province. Their study found that despite some cooperative efforts, competition between localities remained dominant, leading to suboptimal cooperation outcomes. This competitive environment likely explains why the gap between expected and perceived benefits did not significantly affect cooperation. Local governments tend to prioritize individual gains over collective benefits, leading to less effective collaboration in attracting FDI.

In conclusion, while the gap between expected and perceived cooperation benefits may have some impact on local governments' cooperation, factors such as local competition, institutional trust, and the clarity of expected benefits play a more significant role. Therefore, hypothesis H1 is not supported in this context.

Hypothesis H2: The regression results indicate an insignificant relationship between the propensity to intensify the cooperation (pcinte) and the Gap between expected and perceived cooperation transaction costs (CGap). It means that *the hypothesis H2 is also not valid*.

This finding is not consistent with that in the studies of scholars, such as: Clarke (1998), Feiock (2008), Steinacker (2010), Hawkins and Andrew (2010) … However, this result is consistent with that in the studies of some scholars like Connell et al. (1996), Shrestha (2008), … The scholars' survey results and studies are entirely consistent with the current situation of Northern KEZ of Vietnam. Unlike other economic zone, Northern KEZ of Vietnam is a zone that has achieved a high level of economic development and has become a region which is the most capable of promoting FDI in the country of Vietnam. Instead of having demands for intensifying the cooperation to take advantage of other localities' resources, local governments in the Zone are capable of support the development of others in term of human resources, capital, technology and services. Currently, the Northern KEZ of Vietnam has attracted a huge amount of FDI from foreign investors and has become a place where many high-tech industrial projects with advanced production lines are being implemented. The Zone is more attractive to foreign investors than others in the country of Vietnam. In addition to the current cooperative relationships, regardless of the gap of cooperation costs, local governments in the Zone are paying attention to improve the competitiveness of their localities. Actual results show that competition among local governments is increasing when such local governments are offering more preferential policies and promoting FDI according to the non-planned process. This has negative consequences for the development and management of the whole Zone.

The results of Nguyen Hiep and Phan Van Toan's study (2020) show that cooperation costs are not a major barrier to regional linkages in attracting FDI. This is reflected in the survey results, in which cooperation costs are not considered high compared to other factors such as political risks and institutional environment. This study also shows that the risks of regional cooperation are more important than financial costs. Specifically, localities are more concerned about the risk of not being able to coordinate well, the risk of disagreement in the division of responsibilities, and the risk of partners not fulfilling their commitments, than they are worried about the direct costs of cooperation.

This may help explain why H2 is not supported: Cooperation costs may not be the most important factor influencing the decision to cooperate, but instead, the potential risks in cooperation are the deciding factor.

Localities may be willing to accept some costs if they believe that cooperation will bring large benefits, but if the risks are not controlled, they will be less willing to cooperate. Measuring costs may not reflect the reality of localities, because many costs associated with cooperation are non-financial, such as time, human resources, or loss of autonomy in local policy.

Lê Văn Thắng and Nguyễn Lưu Bảo Đoan (2017) conducted a study on the factors influencing foreign direct investment (FDI) inflows in Vietnamese provinces using a spatial econometric model. The findings indicate that market size, labor quality, and infrastructure systems are critical determinants in attracting FDI. However, the study did not find a statistically significant relationship between labor costs and FDI, suggesting that cost-related factors may not play as crucial a role as initially expected in FDI attraction. This finding may explain why hypothesis H2 regarding the impact of cooperation costs was not supported in the study (Lê & Nguyễn, 2017).

Hypothesis H3: The regression results indicate a significant and negative relationship between the propensity to intensify the cooperation (pcinte) and the Gap between expected and perceived cooperation risks (RGap), by having the coefficient =-0.141 with SE = 0.028. This coefficient is significant at $p<0.001$. So, *the hypothesis H3 is accepted*. It means that the Gap between expected and perceived cooperation risks influence negatively the propensity to intensify the cooperation among local governments.

This result is consistent with the research results of some scholars mentioned in the theory section like Krueger & McGuire (2005) and Bernoulli (1954). This is entirely consistent with the current situation of Vietnam's Northern KEZ. This region currently attracts nearly 900 FDI projects and accounts for more than a quarter of the total FDI of Vietnam, just after Vietnam's Southern KEZ. Vietnam's Northern KEZ is currently the most important position in Vietnam for industrial development when there are close cooperation relationships among local governments through affiliated clusters and networks. In addition, the Zone has been given special priority by the Government in promoting the development of high-tech industry, clean technology and focusing on key industries. Along with the current positions and benefits gained from the existing cooperation among local governments, the primary objectives of local governments in the Zone are to maintain and tighten current cooperation relationships, and together estimate, measure and solve risks arising during the socio-economic development cooperation.

Nguyễn, Q. V., Chu, T. N., Trần, T. G. Q., & Phạm, T. H. (2014) found that supportive institutional factors such as the dynamism of provincial leaders, labor training, and private economic development policies do not have a strong impact on FDI attraction. This may be related to the gap between expectations and reality – if businesses or localities expect that supportive institutions will help attract FDI, but the reality does not meet expectations, this gap may reduce the motivation to cooperate.

Hypothesis H4: The regression results indicate a significant and positive relationship between the Gap between expected and perceived cooperation transaction costs (CGap) and the Gap between expected and perceived cooperation risks (RGap), by having the coefficient = 0.715 with SE = 0.065. This coefficient is significant at $p<0.001$. *So, the hypothesis H4 is validated*. It means that an increase of the Gap between expected and perceived cooperation risks will increase the Gap between expected and perceived cooperation transaction costs; and vice versa.

5. Conclusion

In this study, we developed theoretical frameworks for assessing the cooperation in the public sector at provincial level of a developing country. The theoretical background of determinants of intensity of cooperation among local governments is constituted by combining the theoretical framework of collective action, theory of reasoned action and theory of planned behavior, and the theoretical framework of risk aversion.

We develop the conceptual model and hypotheses on the determinants of cooperation intensity among local governments in promoting FDI. In which, we develop hypotheses on the impacts of the gap between expected and perceived cooperation benefits, gap between expected and perceived cooperation transaction costs, gap between expected and perceived cooperation risks and cooperation intensity among local governments; and also, on the structural relationships among these factors.

Benefits gap via cooperation among local governments in FDI promotion in the Northern KEZ of Vietnam does not have an impact on cooperative intensity but have an orthodromic effect on the intensification level of cooperation in cooperative activities. All officers and employees in these local governments believe that the actual result of this factor is not as satisfactory as expected and they hope that in the future it will be better than at present. Gaps of expected and perceived costs do not affect cooperative intensity but have an anti-orthodromic effect on the intensification level in cooperative activities. With the actual situation of expected cost from cooperation among local governments in the Zone better than expected, all officers and employees hope that this result will be better in the future.

Declarations

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Competing Interests Statement

The author has not declared any conflict of interest.

Consent for publication

The author declares that he consented to the publication of this study.

Authors' contributions

Author’s independent contribution.

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