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Role of International Synergistic Partnerships in Developing Urban Outskirts of Kigali City, Rwanda

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Abstract: *Despite the expansion of international partnerships, Kigali continues to face infrastructure and service-delivery pressures linked to rapid urban growth. This study assessed the role of institutional cooperation, intergovernmental cooperation, and economic cooperation in developing the urban outskirts of Kigali City, Rwanda. Liberalism Theory and Institutional Theory informed the analysis. A cross-sectional descriptive and correlational design used structured questionnaires, documentary information, and contextual stakeholder accounts. The target population was 310, with 175 selected through stratified random sampling and 161 complete questionnaires (92.0%) analyzed in SPSS version 29. Institutional cooperation ($B = 0.123$, $p = 0.013$), intergovernmental cooperation ($B = 0.202$, $p < 0.001$), and economic cooperation ($B = 0.614$, $p < 0.001$) were positively associated with perceived development of urban outskirts. The fitted model achieved $R = 0.918$, $R^2 = 0.843$, and adjusted $R^2 = 0.840$; economic cooperation recorded the strongest independent association. Since the sample represented Kigali City generally rather than only its outlying settlements, the findings identified city-wide stakeholder associations relevant to peripheral urban development, not outskirts-specific causal effects. The study recommended greater coordination of international partnerships, inclusive allocation of infrastructure support, improved environmental management, and local implementation oversight.*

Keywords*: International synergistic partnerships, Institutional cooperation, Intergovernmental cooperation, Economic cooperation, Development of urban outskirts, Kigali City; Rwanda*

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1. Introduction

At the global level, international cooperation has become an important mechanism for addressing urban expansion, infrastructure needs and environmental pressures. Multilateral institutions support municipal finance, urban planning, technical assistance and climate resilience. These arrangements are relevant to the first objective, which examines the contribution of institutional cooperation to development of urban outskirts, including infrastructure access, equitable service delivery and safer environments (Satterthwaite, 2024). Japan continues to serve as a reference point in the world in international cooperation in disaster-resilient urban development where the country has a long history of response to earthquakes, tsunami and extreme weather events. Through partnerships with television with organizations including UN-Habitat, Japan is advocating for seismic proof construction models, early warning systems and compact city planning in hazard vulnerable areas. Its cooperation work also includes financial support of flood mitigation technologies, and participation in the collaboration on urban risk management expertise in the region of whole Asia. Japanese cities have incorporated such globally informed tools in national programs for adaptive infrastructure and efficient land-use planning programs. This reflects the commitment of Japanese government towards global partnerships that build resilient urban systems for a long time (Watson, 2022).

Kenya works closely with international partners to build capacity of Nairobi and Mombasa to deal with rapid urban growth. Programs supported by the World Bank and UN-Habitat have funded storm water drainage systems, better informal settlement and metropolitan transport planning. Cooperation has also seen the data-driven tools to help the county governments monitor the change in land use and

infrastructure gaps. These initiatives are part of enabling the implementation of the National Urban Development Policy in Kenya, in addition to a Metro reform. Through these partnerships, Kenyan cities are better placed in finding solutions to complex problems which their infrastructure and the environmental environment are experiencing (Mwangi & Wanjiru, 2023).

Uganda's urban development sector has benefited from cooperation partnerships on the governance and infrastructure weaknesses of such cities as Kampala, Jinja and Mbale. Global agencies preach in favor of municipal reforms which include increased revenue collection, waste management and transport planning. International collaboration has also made funds available for drainage improvements and markets upgrading in flood prone urban neighborhoods. These types of interventions advocate for better planning coherency and institutional coordination in the city authorities of Uganda. The fact that the country is still in the process of reforming indicates the importance of external support in the process of improving management of urban development (Mukwaya & Sengendo, 2021).

In Rwanda, national frameworks, including Vision 2050 and the National Strategy for Transformation, emphasize well-planned urban growth, resilient infrastructure and improved service access. Multilateral partners contribute development finance and technical expertise; bilateral partners provide targeted cooperation; and economic partnerships may improve access to resources and investment. Their combined relevance to infrastructure, safety, development equity and sustainability provides the national context for the three specific objectives (Government of Rwanda, 2023).

In Kigali City, cooperation-supported initiatives relate to roads, drainage, urban planning, land administration and environmental management. These interventions have implications for communities on the city's outskirts as well as established neighbourhoods, but the available study data do not separately estimate impacts for outlying settlements. Consequently, the analysis evaluates cooperation and perceived development of urban outskirts across Kigali City while discussing the significance of those outcomes for safe and clean urban environments (City of Kigali, 2020).

International and regional framework approaches also provide an important direction for understanding how international synergistic partnerships influence development of urban outskirts in Kigali City. Recent global urban development discussions emphasize that cities need integrated planning, resilient infrastructure, inclusive service delivery, and sustainable environmental management to respond to rapid urbanization. At the African and regional levels, development frameworks increasingly promote infrastructure connectivity, regional integration, climate resilience, trade facilitation, and institutional strengthening as key foundations for sustainable urban transformation. Therefore, Kigali's urban development agenda is not only shaped by national priorities but also by international and regional framework approaches that guide institutional cooperation, intergovernmental cooperation, and economic cooperation toward improved infrastructure access, development equity, sustainability adoption, and stronger institutional capacity (UN-Habitat, 2022).

Despite the expansion of international partnerships, Kigali continues to face infrastructure and service-delivery pressures linked to rapid urban growth. Rwanda's 2022 population census reported that 27.9% of residents lived in urban areas, underscoring the need for coordinated investment and planning. The concern addressed by the first objective is whether institutional cooperation has sufficiently translated shared financing and technical commitments into accessible infrastructure and equitable urban services in Kigali City (Government of Rwanda, 2023; NISR, 2023).

A distinct challenge concerns the integration of bilateral technical cooperation into urban safety and environmental management. Flood-prone settlements and vulnerable drainage corridors require locally appropriate design, maintenance capacity and effective institutional responses. Although international environmental initiatives have supported resilience measures, exposure to flooding remains a concern. The second objective therefore examines how intergovernmental cooperation relates to development of urban outskirts associated with safety, institutional preparedness and environmental conditions (UN-Habitat, 2022).

Economic Cooperation presents a further challenge: regional market integration, customs efficiency and investment opportunities do not automatically produce inclusive improvements in urban neighbourhoods. When economic benefits are concentrated or insufficiently linked to city planning, infrastructure and service needs may remain unmet. The third objective therefore evaluates the relationship between economic cooperation and development of urban outskirts, particularly infrastructure access, development equity and sustainable growth (Goodfellow, 2021).

Existing scholarship has not sufficiently distinguished the roles of institutional cooperation, intergovernmental cooperation, and economic cooperation in developing Kigali City's urban outskirts. The study addressed this gap through stakeholder assessments of security perception, infrastructure access, development equity, and sustainability adoption. Because the survey covered Kigali City rather than an outskirts-only sample, its results describe city-wide associations relevant to peripheral urban development, not separate causal effects for outskirts settlements.

1.1 General Objective

The general objective was to examine the role of international synergistic partnerships in developing the

urban outskirts of Kigali City, Rwanda, through institutional cooperation, intergovernmental cooperation, and economic cooperation.

1.2 Specific Objectives

1. To evaluate the role of institutional cooperation in developing urban outskirts of Kigali City, Rwanda, during 2021–2025.
2. To assess the role of intergovernmental cooperation in developing urban outskirts of Kigali City, Rwanda, during 2021–2025.
3. To examine the role of economic cooperation in developing urban outskirts of Kigali City, Rwanda, during 2021–2025.

2. Literature Review

This section presents the theoretical foundations and prior empirical evidence relevant to the study objectives.

2.1 Theoretical Review

The following theories provide the basis for examining the relationships between the independent variables and project outcomes.

2.1.1 Liberalism Theory

Liberalism as a theory of international relations has its roots in the classical realms of Immanuel Kant (1795) and was theorized as a modern international relations theory by theorists like Woodrow Wilson in the 1910s. The theory came about as a reaction to realism where cooperation between states can occur based on common interests, common institutions, and interdependence. Liberalism lays stress on peace, cooperation, and the use of international organizations to influence the world's development. The theory is that states have advantages of cooperation as opposed to actions taken in isolation. Fundamentally, liberals consider collaboration as a source of reciprocal development and peace (Kumar & Bansal, 2021).

The main tenet of liberalism is that institutions, rules and norms form predictable environments in which cooperation thrives. It claims that communication via diplomacy, trade, and alliances diminishes the struggle and augments in common benefits. Liberalism also emphasizes the role of non-state actors like NGOs, development agencies, and municipal governments in the international outcomes. According to this view, states and subnational actors voluntarily participate in collaborative arrangements by finding long-term gains. According to this worldview, interconnectedness is a source of sustainable development (Watson, 2022).

Liberalism reasons the involvement of countries in institutional and intergovernmental cooperation to tackle issues in the city through development of infrastructure, climate resilience, and services provision. Governments are involved in institutions like the world bank, UN-Habitat and the regional development banks since they create resources, information and stability. Liberalism also explains the role that world policy systems such as SDGs play in establishing mutual commitments that states willingly accept. Cooperation therefore is a strategic tool of enhancing national and local development results. According to the theory, international alliances generate win-win situations at the global level (Satterthwaite, 2024).

However, Liberalism Theory has a weakness because it may overemphasize cooperation and mutual benefits while giving limited attention to power differences among countries and institutions. In practice, international partnerships may not always produce equal benefits because stronger partners may influence priorities, funding conditions, and policy choices. Therefore, while the theory helped explain cooperation, it may not fully explain inequalities, dependency, and unequal bargaining power within international synergistic partnerships.

Liberalism Theory was applied in this study because it explained how cooperation among states, international organizations, and development partners can support mutual development benefits. The theory was linked to the study because Kigali City depends on institutional cooperation, intergovernmental cooperation, and economic cooperation to access financial support, technical expertise, infrastructure investment, policy guidance, and development networks.

2.1.2 Institutional Theory

The institutional Theory appeared as a result of the efforts of sociologists, such as John Meyer in the 1970s, and was elaborated by DiMaggio and Powell (1983). It came up to expound on the ways in which institutions influence the actions of organizations in terms of rules, norms and expectations. According to the theory, the organizations do not behave purely in line with efficiency but also out of legitimacy and aligned to global or national standards. Institutional environments affect decisions, structures and practices in any sector. In general, it offers a prism through which the organizational behavior is defined by the external forces (Bah & Faye, 2022).

The Institutional Theory has three mechanisms: coercive pressure, normative pressure and Mimetic pressure. Coercive pressure is created by laws and regulations, the normative pressure by professional standards and the mimetic pressure by imitating successful models. There is adjustment of organizations to these forces in order to achieve legitimacy, resources and approval of society. Institutional conformity affects planning, operations, and assessment of organizational activities. This can be used to understand why the organizations embrace similar practices in various settings (Mokoena & Pretorius, 2022).

The institutional theory explains the use of global norms like sustainable cities, climate adaptation, and good

governance by international organizations on partner countries. Multilateral institutions establish standards in terms of agreements, funding conditions and policy frameworks. These norms are therefore embraced by countries in a bid to gain legitimacy, financial assistance, and conformity to international development interests. In this way, the institutional theory describes SDG 11, New Urban Agenda and resilience framework spread. These international standards affect the national and local policies by means of vertical integration (Mahendra & Seto, 2021).

A major limitation of Institutional Theory is that it gives strong attention to rules, norms, and external standards, but it does not adequately show how these standards are translated into practical action. Institutions may adopt international frameworks to gain legitimacy, but implementation may remain weak due to limited resources, poor coordination, or administrative constraints. In this study, this weakness was important because Kigali City may align its urban development policies with global and regional frameworks, while actual results may depend on local capacity and enforcement.

Institutional Theory was applied in this study because it explained how institutions are influenced by rules, norms, standards, and policy expectations from the external environment. The theory was relevant because Kigali City's urban development practices are shaped not only by local priorities but also by international and regional frameworks promoted through development partners, multilateral agencies, intergovernmental cooperation, and trade-related institutions.

2.2 Empirical Review

The empirical review presents evidence from studies corresponding to each specific research objective.

2.2.1 Institutional Cooperation and Development of Urban Outskirts

Mahendra and Seto (2021) examined the role of multilateral development partnerships in the formulation of city expansion in the rapidly expanding cities of India. Their aim was to determine the impact of international cooperation on transportation planning, land-use efficiency and environmental outcomes. Through geospatial analysis, municipal data and numbers and interviews with planning professionals, they established that the cities that interacted with multilateral institutions like the World Bank transformed into integrated mobility planning by 14 and minimized fragmented urban sprawl. Their regression models proved a high correlation between multilateral support and spatial development indicators improvements. The authors concluded that the international collaborations made India very apt in terms of metropolitan planning.

Berruti and Certomà (2022) examined the impact of institutional cooperation within the framework of the EU Urban Agenda on the performance and sustainability of the governance in the case of the selected EU cities. The goal of their study was to find out whether EU-coordinated partnerships enhanced the execution of urban mobility, housing, and environmental programs. Based on comparative case-study design in eight cities, coupled with the review of EU partnership progress reports, they established that cities that were active in the multilateral platforms would have 23% more sustainability initiatives compared to those not in the partnerships. There were also indications of enhanced cross-departmental coordination and increased innovation in the uptake of innovative planning tools.

Mukherjee and Geyer (2023) conducted an empirical research study to investigate the impact of donor-funded multilateral programming on the metropolitan governance reforms within the city of Johannesburg. The aim of the study was to establish the role of alliances with World Bank, UN-Habitat, and AfDB in contributing to the enhancement of infrastructure preservation and administration. Based on mixed-method interviews of 40 municipal officials and 2015-2022 performance audits, the authors discovered that multilateral-supported reforms led to the 11 percent increase in the reliability of water infrastructure and the efficiency of the digital land-administration. The statistical results were that service-delivery satisfaction rose by 68 percent against 54 percent in the course of the multilateral partnership. The authors suggested the establishment of multilateral-backed monitoring systems in the municipal framework.

2.2.2 Intergovernmental Cooperation and Development of Urban Outskirts

The empirical research by Zhou and Liu (2022) investigated the role of bilateral infrastructure cooperation as part of the Belt and Road Initiative in China in other cities of China in terms of the degree of urban development. Their goal was to establish whether bilateral funding and technical transfer enhanced transport networks, industrial zones and metropolitan connectivity. They used panel data of 38 cities in 2005-2020 and applied fixed-effects regression and established that intergovernmental cooperation projects led to higher efficiency of urban infrastructure by an average of 12 percent. They also found statistically significant positive changes in urban accessibility ($p < 0.01$) that are associated with bilateral-funded transport corridors. The research found that the two-way relations served as a powerful motivator to the modernization of the Chinese cities.

Marusic and Bego (2021) examined the implications of the bilateral collaboration of the EU member countries on the urban governance changes in the Western Balkan cities. The aim of the study was to determine the role of bilateral technical assistance in terms of better planning systems, service delivery and local governance. Based on semi-structured interviews with 58 municipal authorities and analysis of bilateral project analyses, the researchers

discovered that cities that received bilateral assistance incorporated 19 percent more governance reforms than those who did not have external partnerships. Descriptive statistics also indicated that there was a significant improvement in the scores of municipal capacities since it increased by 2.8 to 3.5 based on a five-point scale. They concluded that intergovernmental cooperation promoted the quicker modernization of the administration and enhanced the consistency of planning.

2.2.3 Economic Cooperation and Development of Urban Outskirts

Liu et al. (2025) analyzed the relationship between trade openness and new-type urbanization in 31 Chinese provinces in 2008 to 2022 to take a closer look at how the moderating effect of industrial structure upgrading existed between these two factors. The authors have used quantile regression model and instrumental variable to overcome endogeneity when examining the impact of external economic partnerships on the quality of urban development. Some of the most notable empirical results indicated that trade openness has a much stronger positive linear influence on urbanization with the modernization of industrial organizations enhancing the effect; heterogeneity analysis indicated that the effect was more prominent in the eastern coastal areas than the inland ones. The findings showed that trade can be used to promote urbanization; however, its effectiveness depends on the extent to which the region is industrialized and integrated into the global value chains.

Kimino (2025) examined the motivation of foreign direct investment (FDI) global value chains at the sub-national level by examining the agglomeration economies within the European Union. The study applied negative binomial regression analysis to a sample of 223 EU areas (a 13-year period) to establish the effect of the characteristics of region on the attraction of various forms of FDI. Statistical findings showed that population density and urbanization play an important role in predicting manufacturing and logistics FDI but capital cities tend to repel investments related to manufacturing because of limited resources and congestion. The researchers concluded that localized specialization and urban agglomeration generate positive knowledge spillovers that are essential in the process of incorporating regions in the global economic partnerships.

Andohol *et al.* (2024) studied how trade liberalization, non-oil exports and economic growth in Nigeria interact based on time-series data of 1986-2021. The authors used Autoregressive Distributed Lag (ARDL) model to determine whether opening trade borders and non-petroleum export diversification substantially contributed to the development path of the country. The empirical results indicated that although trade liberalization did not produce positive coefficients in some cases because of import surge, the interactive effect of trade liberalization and non-oil exports was also positive and statistically significant in enhancing sustainable growth. In particular, the model proved that the relationship between open trade policies and a sound non-oil export sector is the key to the long-term economic stability. The authors have concluded that open trade is vulnerable to external shocks and trade deficits because of lack of diversification in exports.

Hersi *et al.* (2025) claimed to examine the performance of the East African Community (EAC) as a trade block in terms of trade performance and integration of the infrastructure between the years 2009 and 2023. The paper has adopted a longitudinal analysis of trade flows and infrastructural information to gauge the degree to which economic partnerships have been translated into intra-regional development. Critical results also revealed that intra-EAC trade volumes are not very high, as they constitute only 15-20 percent of the total trade of member states with large differences of Kenya dominating exports (up to $1.8 billion in 2022) and other countries remaining peripheral. As noted by the research, the significant impediments to economic connectivity between urban and regional areas were caused by the high transportation costs (at the average of 0.17-0.25 per ton-kilometer, which is almost three times higher than in the developed areas). The authors concluded that even after certain tariffs have been eliminated, the influence of the development of the trade bloc is still constrained by non-tariff barriers and infrastructure gaps.

Nzabirinda (2022) made an econometric analysis to estimate the effect of the international trade variables on the economic growth of the country based on the data of almost thirty years. It aimed at isolating the role of trade openness and foreign direct investment (FDI) in the Gross Domestic Product (GDP) of Rwanda through a regression model. The empirical findings showed that there is a positive and significant correlation between trade openness and FDI with a coefficient of about 0.048 and 0.19 respectively on GDP growth respectively controlling other variables. These results indicate that the Rwandan strategic initiative of open economy and foreign relations has paid off into the quantifiable economic growth, though, the balance of trade is an issue. The paper came up with a conclusion that international trade is a statistically significant contributor to the economic performance of Rwanda.

Through the reviewed studies, international cooperation was examined using different units and methods. Mahendra and Seto (2021) emphasized geospatial and municipal evidence from Indian cities, whereas Mukherjee and Geyer (2023) combined municipal interviews and administrative records in Johannesburg. These approaches clarify planning and governance effects but do not isolate the perceptions of Kigali stakeholders across all three types of cooperation. Liu *et al.* (2025) adopted regional quantitative modeling to study trade and urbanization; its broader geographic scale limits direct application to neighborhood-level service and environmental outcomes in Kigali. The studies consequently provide complementary, rather than interchangeable, evidence for the present objectives.

3. Methodology

The study examined the relationship between institutional, intergovernmental, and economic cooperation and reported urban-development conditions in Kigali City. Quantitative questionnaire evidence was complemented by documentary records and available stakeholder accounts.

3.1 Research Design

A cross-sectional descriptive and correlational design was applied. Descriptive statistics summarized responses, and correlation and multiple regression quantified associations between the three cooperation variables and development of urban outskirts. Qualitative stakeholder accounts and documents provided supporting context rather than separate regression observations.

3.2 Study Population

The population included 310 stakeholders in Kigali City involved in or affected by international cooperation supported urban development: development officers, local leaders, key stakeholders, urban planners, and managers of cooperation projects.

3.3 Sampling Design

A planned sample of 175 participants was selected from the 310-member population through stratified random sampling across stakeholder categories. The study used a 5% margin of error as the stated precision benchmark. A total of 161 complete questionnaire responses were available for statistical analysis.

3.4 Data Collection Instrument

A structured questionnaire measured institutional cooperation, intergovernmental cooperation, economic cooperation, and development of urban outskirts through four substantive statements for each construct. Items used a five-point Likert agreement scale; the demographic section covered four respondent characteristics. Documentation included available cooperation agreements, municipal planning documents, partnership materials, and project implementation reports.

3.5 Pilot Study, Validity and Reliability

A pilot test was conducted among 18 participants from Musanze District to evaluate the clarity, relevance, and comprehensibility of the questionnaire items. The dissertation reported a CVI of 0.80 against an acceptable threshold of 0.70. Internal consistency was evaluated using Cronbach's alpha with 0.70 as the minimum standard. The four coefficients were 0.842 for institutional cooperation, 0.831 for intergovernmental cooperation, 0.856 for economic cooperation, and 0.864 for development of urban outskirts.

3.6 Data Analysis

Responses were coded and analyzed in SPSS version 29 using frequencies, percentages, means, and standard deviations. Pearson correlation measured bivariate associations. Multiple linear regression estimated the unique and combined relationships of the cooperation dimensions with perceived development of urban outskirts at $\alpha = 0.05$. Collinearity was assessed using VIF and tolerance; the Durbin–Watson statistic supported assessment of residual autocorrelation. The regression equation was $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$, where Y represented development of urban outskirts, X_1 institutional cooperation, X_2 intergovernmental cooperation, and X_3 economic cooperation. Available stakeholder statements were grouped thematically for qualitative interpretation.

3.7 Ethical Considerations

The study used institutional permission, informed consent, voluntary participation, privacy, confidentiality, and restricted use of collected evidence. Participation was not compulsory and the data were used for academic analysis.

4. Results and Discussion

This section reports completed questionnaires, correlation and regression statistics, decisions on the study objectives, and a comparison of the findings with reviewed theoretical and empirical material.

4.1 Response Rate

The response-rate analysis identifies the proportion of the 175 selected questionnaires that yielded complete responses for the quantitative analysis.

Table 1: Questionnaire response rate

Questionnaire status	Frequency	Percent
Filled and returned	161	92.0
Incomplete	8	4.6
Unreturned	6	3.4
Total	175	100.0

Source: Field data, 2026

As presented in Table 1, a total of 175 questionnaires were distributed, yielding 161 complete responses (92.0%), while 8 (4.6%) were incomplete and 6 (3.4%) were unreturned. The final dataset comprised 161 valid cases for inferential statistical analysis.

4.2 Inferential Statistics

Pearson correlation assessed each cooperation dimension against development of urban outskirts, while multiple regression quantified the relationships after adjusting for the remaining predictors.

4.2.1 Correlation Analysis

The correlation matrix summarizes relationships among institutional cooperation, intergovernmental cooperation, economic cooperation, and perceived development of urban outskirts, using 161 complete responses.

Table 2: Pearson correlations between cooperation variables and development of urban outskirts

		Institutional Cooperation	Intergovernmental Cooperation	Economic Cooperation	Development of Urban Outskirts
Institutional Cooperation	Pearson Correlation	1	.733**	.727**	.758**
	Sig. (2-tailed)		.000	.000	.000
	N	161	161	161	161
Intergovernmental Cooperation	Pearson Correlation	.733**	1	.700**	.757**
	Sig. (2-tailed)	.000		.000	.000
	N	161	161	161	161
Economic Cooperation	Pearson Correlation	.727**	.700**	1	.897**
	Sig. (2-tailed)	.000	.000		.000
	N	161	161	161	161
Development of Urban Outskirts	Pearson Correlation	.758**	.757**	.897**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	161	161	161	161

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Field data, 2026

The findings in Table 2 reveal significant positive correlations between institutional cooperation ($r = 0.758$, $p < 0.001$), intergovernmental cooperation ($r = 0.757$, $p < 0.001$), and economic cooperation ($r = 0.897$, $p < 0.001$) and the development of urban outskirts. Economic cooperation exhibited the strongest relationship, with all three correlations statistically significant at the 0.05 level.

4.2.2 Regression Analysis

The multiple regression tested whether institutional, intergovernmental, and economic cooperation explained variation in the perceived development outcome when estimated simultaneously.

Table 3: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.918[a]	.843	.840	.21358	2.107

a. Predictors: (Constant), Economic Cooperation, Intergovernmental Cooperation, Institutional Cooperation

b. Dependent Variable: Development of Urban Outskirts

According to Table 3, the regression model produced R = 0.918, $R^2 = 0.843$, and adjusted $R^2 = 0.840$, indicating that institutional, intergovernmental, and economic cooperation collectively explained 84.3% of the variation in the development of urban outskirts. The Durbin–Watson statistic of 2.107 suggested no substantial first-order autocorrelation.

Table 4: ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38.485	3	12.828	281.224	.000[b]
	Residual	7.162	157	.046		
	Total	45.647	160			

a. Dependent Variable: Development of Urban Outskirts

b. Predictors: (Constant), Economic Cooperation, Intergovernmental Cooperation, Institutional Cooperation

Source: Field data, 2026

The ANOVA results presented in Table 4 indicate that the overall regression model was statistically significant, $F(3, 157) = 281.224$, $p < 0.001$. This demonstrates that institutional, intergovernmental, and economic cooperation jointly provided statistically significant explanatory power regarding the development of urban outskirts.

Table 5: Regression coefficients

						Collinearity Statistics	
	Unstandardized Coefficients		Standardized Coefficients				
Model	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1(Constant)	.268	.140		1.908	.058		
Institutional Cooperation	.123	.049	.131	2.523	.013	.373	2.681
Intergovernmental Cooperation	.202	.051	.196	3.944	.000	.404	2.474
Economic Cooperation	.614	.046	.664	13.467	.000	.411	2.436

a. Dependent Variable: Development of Urban Outskirts

Source: Field data, 2026

Institutional cooperation was positively associated with the outcome ($B = 0.123$, $\beta = 0.131$, $t = 2.523$, $p = 0.013$). Intergovernmental cooperation showed a larger positive coefficient ($B = 0.202$, $\beta = 0.196$, $t = 3.944$, $p < 0.001$), while economic cooperation had the strongest association ($B = 0.614$, $\beta = 0.664$, $t = 13.467$, $p < 0.001$). VIF values ranged from 2.436 to 2.681 and tolerances from 0.373 to 0.411, showing no indication of severe multicollinearity under conventional checks. The fitted equation was: Development of Urban Outskirts = 0.268 + 0.123(Institutional Cooperation) + 0.202(Intergovernmental Cooperation) + 0.614(Economic Cooperation) + ε.

4.3 Decision on Null Hypotheses

This section presents the decisions on the study's three null hypotheses based on the multiple regression results. Each hypothesis was evaluated at a 5% significance level ($\alpha = 0.05$) to determine whether institutional cooperation, intergovernmental cooperation, and economic cooperation had statistically significant associations with the development of urban outskirts of Kigali City.

Table 6: Decision on null hypotheses

Hypothesis	Regression significance	Decision
H_{01}: Institutional cooperation has no significant association with development of urban outskirts.	.013	Rejected
H_{02}: Intergovernmental cooperation has no significant association with development of urban outskirts.	< .001	Rejected
H_{03}: Economic cooperation has no significant association with development of urban outskirts.	< .001	Rejected

Source: Field data, 2026

The hypothesis-testing results in Table 6 demonstrate that institutional cooperation ($p = 0.013$), intergovernmental cooperation ($p < 0.001$), and economic cooperation ($p < 0.001$) were statistically significant at the 0.05 threshold. Accordingly, all three null hypotheses (H_{01}, H_{02}, and H_{03}) were rejected, confirming significant positive associations between the respective cooperation dimensions and the development of urban outskirts.

4.4 Discussion of Research Findings

This discussion compares the three empirical associations with sources already reviewed under the theoretical and empirical sections, while respecting the city-wide scope of the respondent sample.

4.4.1 Institutional Cooperation and Development of Urban Outskirts

Institutional cooperation was significantly and positively associated with reported development of urban outskirts ($B = 0.123$, $t = 2.523$, $p = 0.013$). This pattern is consistent with Mahendra and Seto (2021), who examined international partnerships and planning outcomes, and Berruti and Certomà (2022), who connected coordinated urban platforms with improved implementation across development priorities. Mukherjee and Geyer (2023) similarly linked cooperation arrangements with municipal governance and service delivery. Liberalism Theory provides an explanation through sustained interaction and mutual benefits from shared commitments, while Institutional Theory directs attention to the rules and arrangements supporting cooperative implementation.

4.4.2 Intergovernmental Cooperation and Development of Urban Outskirts

Intergovernmental cooperation retained a positive and significant independent coefficient ($B = 0.202$, $t = 3.944$, $p < 0.001$), indicating that direct government-to-government arrangements were associated with development perceptions even after institutional and economic cooperation were included. Zhou and Liu (2022) associated bilateral infrastructure arrangements with more effective connectivity and implementation, while Marusic and Bego (2021) emphasized technical assistance and institutional reforms under direct partnerships. Liberalism Theory helps interpret how repeated contact and shared priorities can support sustained intergovernmental coordination. These findings indicate a statistical association within Kigali City, not a demonstrated causal effect confined to outskirts settlements.

4.4.3 Economic Cooperation and Development of Urban Outskirts

Economic cooperation had the largest unique positive coefficient ($B = 0.614$, $t = 13.467$, $p < 0.001$) and the strongest correlation with the outcome ($r = 0.897$). Liu *et al.* (2025) described ways trade openness can support new forms of urbanization when institutional conditions and productive capacity are aligned. Kimino (2025) examined the regional drivers of foreign investment, while Andohol *et al.* (2024) explored trade liberalization and economic performance. Hersi *et al.* (2025) assessed regional economic integration and Nzabirinda (2022) examined trade and economic growth in Rwanda. Institutional Theory helps explain why customs procedures, policy harmonization, and predictable rules can shape the translation of economic cooperation into development opportunities. The city-wide design limits any conclusion about an independent causal effect on peripheral areas specifically.

5. Conclusions and Recommendations

This section draws conclusions from the three objectives and makes practical recommendations for Kigali City and its development partners.

5.1 Conclusion

Institutional cooperation was positively and significantly associated with perceptions of development of urban outskirts, suggesting that coordinated financing, knowledge sharing, and administrative arrangements are important features of urban development partnerships. Intergovernmental cooperation also retained an independent positive association, indicating the relevance of direct technical assistance, diplomatic coordination, and targeted implementation agreements. Economic cooperation showed the strongest positive coefficient, demonstrating the particular importance of trade-related

and investment-related arrangements within the observed city-wide perceptions. The three cooperation dimensions together explained 84.3% of outcome-score variation.

5.2 Recommendations

The following recommendations reflect the study findings and the implementation priorities identified:

1. Kigali City should maintain a consolidated register of multilateral commitments linking each treaty, coalition, or shared-funding arrangement with specific urban development targets and responsible municipal units.
2. Trade and economic institutions should continue reducing administrative delays affecting customs clearance and movement of inputs needed for construction, manufacturing, and urban service activities in Kigali City.
3. Kigali City, RDB, and relevant economic agencies should connect regional market opportunities with investment promotion for infrastructure-linked enterprises, logistics services, green construction, and urban technology.
4. Development partners should align program design with Kigali City planning documents and include practical arrangements for knowledge transfer to local staff throughout implementation.

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