

Collaborative Model Strategy Through Co-Innovation and Government Empowerment Programs to Enhance Regional Performance in Poverty Alleviation in West Java

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ABSTRAK

Penelitian ini bertujuan untuk memberikan analisis mendalam tentang pengaruh strategi kolaboratif, ko-inovasi, dan pemberdayaan pemerintah terhadap kinerja daerah dalam penanggulangan kemiskinan di Jawa Barat. Dengan mengatasi kesenjangan empiris, teoritis, dan penelitian, penelitian ini berupaya menjembatani literatur yang ada dengan memeriksa hubungan-hubungan ini dalam konteks di mana penelitian sebelumnya terbatas. Menggunakan desain deskriptif dan verifikasi dengan pendekatan kuantitatif, data dikumpulkan melalui kuesioner yang disebarakan kepada Tim Koordinasi Penanggulangan Kemiskinan (TKPKD) di 27 kabupaten dan kota di Jawa Barat. Penelitian ini menggunakan non-random quota sampling dan memproses data menggunakan Partial Least Squares Structural Equation Modeling (PLS-SEM) untuk mengeksplorasi efek langsung dan termediasi di antara variabel-variabel. Hasil yang diantisipasi menunjukkan bahwa strategi kolaboratif secara positif memengaruhi kinerja penanggulangan kemiskinan daerah, baik secara langsung maupun tidak langsung melalui peran mediasi ko-inovasi dan pemberdayaan pemerintah. Selain itu, penelitian ini diharapkan dapat mengungkap bahwa faktor geopolitik, kebijakan pemerintah, dan kepemimpinan birokrasi secara signifikan membentuk penerapan strategi kolaboratif di wilayah tersebut. Penelitian ini memberikan kontribusi baru dengan mengatasi kesenjangan empiris yang signifikan dalam studi strategi kolaboratif dalam penanggulangan kemiskinan di Jawa Barat.

ABSTRACT

This study aims to provide an in-depth analysis of the influence of collaborative strategy, co-innovation, and empowering government on regional performance in poverty alleviation in West Java. Addressing empirical, theoretical, and research gaps, the study seeks to bridge existing literature by examining these relationships in a context where prior research is limited. Employing a descriptive and verification design with a quantitative approach, data is collected through questionnaires distributed to the Poverty Alleviation Coordination Teams (TKPKD) across 27 regencies and cities in West Java. The study utilizes non-random quota sampling and processes the data using Partial Least Squares Structural Equation Modeling (PLS-SEM) to explore both direct and mediated effects among the variables. The anticipated results suggest that collaborative strategy positively influences regional poverty alleviation performance, both directly and indirectly through the mediating roles of co-innovation and empowering government. Additionally, the study expects to reveal that geopolitical factors, government policies, and bureaucratic leadership significantly shape the implementation of collaborative strategies in the region. This research makes a novel contribution by addressing a significant empirical gap in the study of collaborative strategies in poverty alleviation within West Java.

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INTRODUCTION

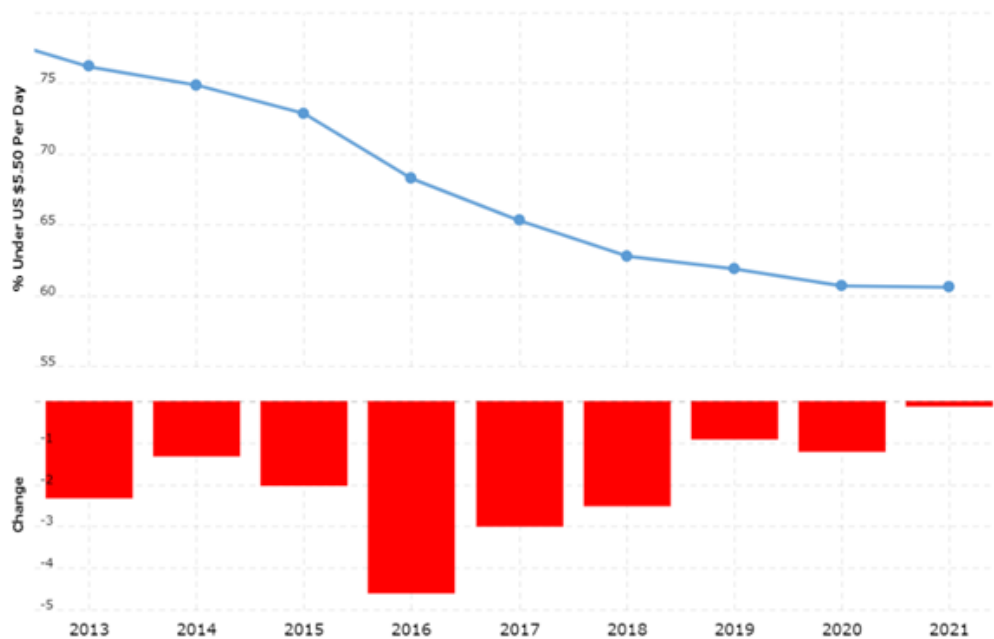
Performance plays a vital role in organizations; performance measurement is very important to evaluate efficiency, effectiveness, and to achieve organizational goals (Bacon, 2023; Mikalef & Gupta, 2021). Performance appraisal helps organizations to identify employees with the best performance and provide feedback and training that needs improvement. Performance also plays a role in improving teamwork, motivation, and responsibility (Aad et al., 2019; Izraelevitz et al., 2019). In addition, performance measurement can help organizations to identify areas for improvement and make decisions about resource allocation and strategy (Taouab & Issor, 2019).

Poverty can also refer to the lack of income and productive resources to ensure a sustainable livelihood (Nathaniel et al., 2021). Its manifestations include hunger and malnutrition, limited access to education and other basic services, discrimination and social exclusion, and lack of participation in decision-making. Different social groups bear a disproportionate burden of poverty (Baloch et al., 2019).

Poverty is a problem that is related to other problems in other social fields. Social problems that occur throughout the world, including in Indonesia, are interrelated with each other. The issue of poverty that occurs in an area is often related to the issue of unemployment, crime rates, drug use, vagrants and beggars, naughty children, abandoned children, prostitutes, violence, stunting, low health levels, and low access and quality of education. All of this has become increasingly prominent since the emergence of the Covid-19 pandemic that has hit the entire world (BPS, 2021).

Indonesia continues to struggle to overcome poverty. Although the poverty rate in Indonesia from 2013 to 2022 has decreased, it is still around 60%, as shown in Figure 1.

Figure 1.
Poverty Rate in Indonesia 2013-2022



Source: (BPS, 2022)

In 2021, the provinces of West Java, Central Java, and East Java had the largest number of poor people in Indonesia. The number and percentage of the extreme poor in Indonesia is 10,785,346 people or 4% of the total population of Indonesia. West Java Province is one of the priority areas because the number of extremely poor people in West Java is recorded at 1.77 million people (3.6 percent). Urban areas are 1.27 million people and rural areas are 507.9 thousand people (BPS, 2022) .

Factors that can affect government performance include the productivity of government officials, the implementation of good government governance , municipal structures, and socio-economic factors (Putri & Wirawati, 2020) . According to a study on government employee productivity, factors that affect performance include freedom and autonomy, job satisfaction, teamwork, supervision and management, communication, and budget and staffing (Mansoor, 2021) . Another study shows that the implementation of good governance, justice, and accountability significantly affect government performance (Beshi & Kaur, 2020) .

Collaborative strategies and co-innovation programs can also be important factors influencing government performance, as they encourage collaboration and innovation in the public sector (Tjahjono & Cao, 2020) . Collaborative strategies involve working with stakeholders to achieve common goals, while co-innovation programs involve collaborating with external partners to develop new products, services, or processes (Bresciani et al., 2021) . This approach can help improve government performance by promoting innovation, efficiency, and effectiveness in the public sector (Zandkarimi et al., 2020) .

Selection of collaborative strategy concepts, co-innovation programs and geopolitics in research This based on the existence of conformity of substance between drafts with phenomenon in poverty alleviation by the West Java Government which emphasizes cooperation and involvement of all stakeholders (government, private sector, community, academics, and media) in the process. Through a collaborative strategy, the government can design assistance for public organizations to analyze various new (innovative) forms that emerge from public partnerships so that their empowerment and management can be more effective and efficient (Beshi & Kaur, 2020) . Based on research, theoretical, and empirical gaps, this study tries to bridge these gaps by emphasizing collaborative strategy, co-innovation and empowerment with a focus on improving poverty alleviation performance in West Java.

Problem Formulation

Based on the background described above, the core problem of this study lies in the persistently high poverty rate in West Java Province despite various government policies and programs that have been implemented. This condition raises critical questions about how internal factors—such as government policy and bureaucratic leadership—and external factors—such as geopolitical dynamics—affect government performance in poverty alleviation. In addition, the lack of comprehensive understanding regarding the mediating roles of collaborative strategy, co-innovation programs, and empowerment government principles presents a significant empirical gap that must be addressed.

From this context, the research questions are formulated as follows:

1. How do government policy, geopolitical conditions, and bureaucratic leadership influence the performance of government in poverty alleviation?
2. To what extent do collaborative strategy, co-innovation programs, and empowerment government mediate the relationship between these factors and government performance?

3. What forms of collaborative strategies and innovations are most relevant and effective in supporting local government performance in poverty reduction efforts in West Java?

Research Objectives

This study aims to:

1. Analyze the influence of government policy, geopolitics, and bureaucratic leadership on the performance of the government in alleviating poverty.
2. Examine the mediating roles of collaborative strategy, co-innovation programs, and empowerment government in the relationship between independent variables and government performance.
3. Provide strategic recommendations based on empirical findings to support the enhancement of local government performance in poverty alleviation programs, particularly through collaborative and innovative approaches.

Literature Review

This research is based on strategic management theory *as a general theory (grand theory)*. This theory explains how organizations utilize their resources and capabilities to achieve their long-term goals. In the context of this research, strategic management theory is used to explain how the government can formulate and implement policies and programs strategically to achieve the goals that have been set (Wheelen & Hunger, 2017).

The middle theories used are governance theory *and* organizational theory. Governance theory is used to explain how the government can organize and manage resources and power to achieve desired goals. While organizational theory is used to explain how the government can design and build effective organizational structures to facilitate the implementation of policies and programs (Ansell & Torfing, 2022).

The applied theories used in this study are government policy, bureaucratic leadership, Collaborative Strategy, co-innovation leadership and empowerment government leadership, geo politics, and government performance in overcoming poverty (performance). Each variable is identified in *the middle theory* included in *governance theory*, namely 1) Government policy, government policy is made, compiled, and implemented in a good governance system 2). Geo Politics, influences government policy in maintaining national interests. 3) *Collaborative Strategy*, focuses on developing cooperation strategies between various stakeholders *in order to achieve common goals*. *Organizational theory* includes 1) Bureaucratic Leadership, this highlights leadership factors that affect the performance of government organizations. 2) *Co-innovation program* and *Empowerment Government Leadership*, emphasize the importance of innovation and empowerment in improving the performance of government organizations. 3) Government performance in overcoming poverty (*Performance*), focuses on measuring and evaluating the performance of government organizations in achieving predetermined goals.

Co-innovation program has shown significant contribution in improving the government's performance in poverty alleviation efforts. Through the utilization of innovative policy instruments such as *social impact bonds* and digital cash transfers, this program has succeeded in expanding vulnerable communities' access to capital, social services, and more inclusive economic support (Surya et al., 2021). The application of technology in aid distribution has also accelerated the empowerment process, while increasing

transparency and accountability in the management of public resources.

The *co-innovation* program also strengthens the concept of *empowering government* by increasing community participation in planning, implementing, and supervising social programs. Active community participation enriches decision-making based on real needs and accelerates the achievement of social development goals, so that the effectiveness of government intervention is higher (Fumasoli, 2021) .

Geopolitical dynamics affect government performance through the allocation of international aid and institutional pressures. Geopolitical shifts impact the distribution of resources across countries, which then influences domestic policy priorities related to poverty alleviation (Arnas, 2022) . Changes in donor preferences, global political influences, and global macroeconomic conditions are important factors that must be anticipated in designing poverty alleviation strategies.

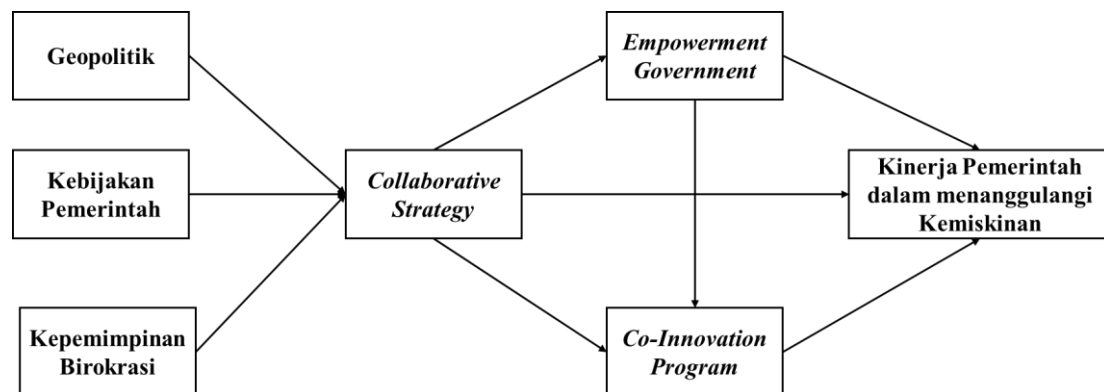
The government policy design that adopts fiscal aid distribution mechanisms, regulatory incentives, and redistribution policies has proven effective in expanding the reach of interventions. This approach accelerates poverty reduction through equal access to basic services and economic opportunities (Amrin et al., 2023) . The integration of various fiscal and social policies in one strategic framework makes government intervention more targeted, measurable, and sustainable.

Adaptive and data-driven bureaucratic leadership is a key factor in the success of poverty alleviation programs. An evidence-based approach encourages increased coordination between government units, improves accuracy in resource distribution, and minimizes the risk of aid leakage, thereby increasing targeting accuracy and strengthening the legitimacy of the program in the eyes of the community (Ngabito & Pakaya, 2024) .

Collaborative strategies play a critical role in strengthening program effectiveness. Cross-sector collaboration involving government, the private sector, civil society organizations, and international institutions enables the integration of expertise, resources, and innovation at every stage of intervention (Hartoyo, nd) . This approach makes the design and implementation of poverty alleviation programs more responsive to the complexity of needs on the ground.

Co-innovation programs serve as mediating mechanisms that integrate geopolitical influences, government policies, and bureaucratic leadership (Bresciani et al., 2021) . By adopting technological and social solutions simultaneously and creating effective knowledge transfer channels between public actors and communities, these programs strengthen the government's capacity to create sustainable social change (S. Zhang, 2022) . The integration of these dimensions emphasizes the importance of collaborative innovation as a strategic approach to addressing the challenges of poverty in the modern era.

Figure 2.
Research Model



Source: Author Processed

RESEARCH METHODS

Research Approach This study employs a quantitative research approach to examine the impact of government policy, geopolitics, bureaucratic leadership, collaborative strategy, co-innovation programs, and empowering government on regional performance, particularly in poverty alleviation efforts in West Java Province. The research utilizes a structured questionnaire as the primary data collection instrument. The analysis is conducted using Structural Equation Modeling-Partial Least Squares (SEM-PLS), which is suitable for handling complex models with multiple relationships, ensuring a robust and comprehensive assessment of the proposed research model. **Data Sources** This study will use two main types of data sources: primary data and secondary data.

- a) **Primary Data:** Primary data is collected through a structured questionnaire distributed to members of the Regional Poverty Alleviation Coordination Team (TKPKD) from each regency/city in West Java Province. Respondents represent the Regional Development Planning Agency (Bappeda) in each regency/city, ensuring relevant insights into government policy implementation and regional performance.
- Secondary Data:** Secondary data includes official government documents, such as poverty alleviation reports, regional development strategies, budget allocation reports, policy regulations, and other relevant documents. This secondary data is used to strengthen the findings from the primary data analysis and provide contextual background on policy and governance in West Java Province.
- Data Collection Techniques** To obtain the required data, the study employs the following data collection techniques:
 - b) **Structured Questionnaire:** A structured questionnaire is distributed to the selected respondents in each of the 27 regencies/cities in West Java Province. The questionnaire covers variables such as government policy, geopolitics, bureaucratic leadership, collaborative strategy, co-innovation programs, empowering government, and regional performance.
 - c) **Documentation Study:** Analysis of official documents and government reports related to poverty alleviation efforts, budget allocation, and regional development policies. This study helps to validate the quantitative findings and provide a deeper understanding of the government's strategic initiatives.

Data Analysis Techniques The collected data will be analyzed using SEM-PLS to test the relationships between variables and determine the impact of independent and mediating variables on regional performance. The analysis follows these key steps:

- a) **Descriptive Analysis:** This step characterizes each research variable, presenting an overview of government policies, geopolitics, bureaucratic leadership, collaborative strategies, co-innovation programs, government empowerment, and regional performance indicators.
- b) **Model Testing:** Using SEM-PLS, this study will analyze the influence of government policy (X1), geopolitics (X2), and bureaucratic leadership (X3) on regional performance (Y) through mediating variables, namely collaborative strategy (M1), co-innovation programs (M2), and empowering government (M3).
- c) **Hypothesis Testing:** Statistical tests will be conducted to determine the significance of each relationship within the research model, assessing the direct and indirect effects of exogenous variables on regional performance.

Data Validity Test To ensure the validity and reliability of the data, the study applies the following validity test techniques:

- a) **Construct Validity:** The measurement model is tested using confirmatory factor analysis (CFA) to ensure that the questionnaire items accurately measure the intended constructs.
- b) **Reliability Test:** Internal consistency of the variables is tested using Cronbach's Alpha and Composite Reliability (CR) to confirm the reliability of the measurement scales.
- c) **Data Triangulation:** The findings from the structured questionnaire will be compared with secondary data sources, such as official government reports and policy documents, to ensure consistency and reduce potential biases in the analysis.
- d) **Model Fit Evaluation:** The SEM-PLS model is assessed for goodness-of-fit using indicators such as R-square values and path coefficients to confirm the robustness of the research model.

By employing these research methodologies, this study aims to provide empirical evidence on the effectiveness of government policies and collaborative governance strategies in improving regional performance and poverty alleviation in West Java Province.

RESULTS AND DISCUSSIONS

Model Test

After completing the measurement of dimensions or indicators of each construct variable, the formulated hypothesis statement can be tested. Variations in data values on dimensions will reflect variations in the constructed variables. The strength or weakness of the relationship between various indicators and construct variables is indicated by the size of the factor value (loading factor) of each indicator. The lambda estimate in the Smart PLS program output is the same as the standardized regression parameter value or path coefficient. The magnitude of the path coefficient considers direct and indirect structural influences:

Table 2.
Estimated Value of Lambda (Loading Factor)

Variables	Dimensions	Loading Factor Value (λ)
Geopolitics	Local Government Funding	0.825
	Political Systems	0.891

	Relationship Government	0.880
Government policy	Government Programs	0.936
	Policy Design and Regulatory	0.944
Bureaucratic Leadership	Accountability	0.916
	Capabilities	0.887
	Experience	0.867
	Inclusiveness	0.833
	Integrity	0.839
Leadership Co-Innovation Program	New Products, Services, Ventures	0.956
	New Value	0.906
	Regulatory and Policy Frameworks	0.916
Collaborative Strategy Leadership	Academics	0.871
	Bilateral Government	0.892
	Corporates	0.928
	Informal Educational Institutions	0.887
Empowerment Government Leadership	Competencies Government	0.898
	Participatory Government	0.879
	Recognition Government	0.713
Regional Performance Leadership	Health Aspects	0.743
	Environmental Aspects	0.866
	Income Aspect	0.735
	Educational Aspects	0.836
	Social Aspects	0.898

Source: Data Processing (2024)

The parameter estimation results in Table 2 show that all λ (lambda) values for the exogenous, intervening, and endogenous variables exceed 0.70, confirming high factor loadings for each indicator. Specifically, the constructs of Geopolitics, Government Policy, Bureaucratic Leadership, Collaborative Strategy Leadership, Co-Innovation Program Leadership, Empowerment Government Leadership, and Regional Governance Performance all exhibit lambda coefficients above the recommended threshold, indicating strong convergent validity. Each indicator within these constructs demonstrates statistical significance at $\alpha = 0.05$, validating the reliability of the measurement model. Therefore, the dimensions and indicators listed in Table 2 proven to be valid and reliable representations of their respective latent constructs, ensuring the robustness of the structural model used in this study.

Reliability Evaluation and Average Variance Extracted

The validity and reliability of a construct can also be evaluated through the construct reliability value and the Average Variance Extracted (AVE) of each construct. A construct is considered to have a high level of reliability if its reliability value reaches 0.70, and the AVE value is greater than 0.50. The following table will show the Composite Reliability and AVE values for all variables.

Table 3.
Results of Data Outliers Testing

Variables	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
Geopolitics	0.873	0.884	0.905	0.614
Government policy	0.891	0.895	0.917	0.648
Bureaucratic Leadership	0.917	0.924	0.931	0.577
Leadership Co-Innovation Program	0.920	0.922	0.938	0.715
Collaborative Strategy Leadership	0.931	0.938	0.942	0.620
Empowerment Government Leadership	0.862	0.875	0.902	0.652
Regional Performance Leadership	0.962	0.966	0.965	0.544

Source: Data Processing (2024)

As shown in Table 3, all constructs in this study demonstrate strong reliability and validity. Cronbach's alpha values for all variables exceed the accepted threshold of 0.70, ranging from 0.862 for Empowerment Government Leadership to 0.962 for Regional Performance Leadership, indicating high internal consistency. Similarly, the composite reliability values (both rho_a and rho_c) are all above 0.87, confirming construct reliability across all variables—Geopolitics (rho_c = 0.905), Government Policy (0.917), Bureaucratic Leadership (0.931), Leadership Co-Innovation Program (0.938), Collaborative Strategy Leadership (0.942), Empowerment Government Leadership (0.902), and Regional Performance Leadership (0.965). Furthermore, the Average Variance Extracted (AVE) values for all constructions exceed the minimum threshold of 0.50, with the highest being Leadership Co-Innovation Program (AVE = 0.715) and the lowest still acceptable at Regional Performance Leadership (AVE = 0.544). These results confirm that each latent variable is measured with reliable indicators and possesses adequate convergent validity, supporting the robustness of the measurement model used in this study.

Inner Model Evaluation (Structural Model)

This evaluation aims to analyze the relationship between constructs in the research model, including testing the level of significance and R-square value. Testing on the structural model involves assessing the R-square value for the dependent construct, which reflects how much variability in the construct can be explained by the independent variables in the model. In addition, the analysis is also carried out using the t-test and testing the significance of the structural path coefficient to ensure the strength and direction of the relationship between variables.

Table 4.
R-Square Value

Variables	R-square	R-square adjusted
Leadership Co-Innovation Program	0.830	0.826
Collaborative Strategy Leadership	0.724	0.715
Empowerment Government Leadership	0.669	0.666

Variables	R-square	R-square adjusted
Regional Performance Leadership	0.298	0.275

Source: Data Processing (2024)

As presented in Table 4, the R-squared values indicate the proportion of variance in each endogenous variable explained by its respective predictors. The *Leadership Co-Innovation Program* shows the highest explanatory power, with an R-squared of 0.830 and an adjusted R-squared of 0.826, meaning that 83% of its variance can be explained by the model. *Collaborative Strategy Leadership* follows with an R-square of 0.724 and an adjusted value of 0.715, reflecting a strong influence from its predictors, particularly *Geopolitics* and *Bureaucratic Leadership*. *Empowerment Government Leadership* also demonstrates substantial explanatory power, with an R-square of 0.669 and an adjusted R-square of 0.666. In contrast, *Regional Performance Leadership* has a relatively lower R-squared value of 0.298 and an adjusted R-squared of 0.275, suggesting that while the model accounts for approximately 29.8% of its variance, other external factors may also play a significant role in determining regional performance outcomes. These values support the structural model's overall predictive relevance, particularly for innovation, collaboration, and empowerment constructs.

Hypothesis Testing Results

The significance of the estimated parameters provides very useful information regarding the relationship between the research variables.

Hypothesis Testing 1

Based on the results of the decision on hypothesis 1 (one), regional performance leadership is influenced by Co-Innovation Program Leadership. directly or through empowering government leadership as seen in the relationship between variables based on the summary of the following parameter estimation results:

Table 5.
Hypothesis Testing 1

Variables	Original sample (O)	Sample means (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	R Square
Co-Innovation Program Leadership -> Regional Performance Leadership	-0.423	-0.430	0.211	2.005	0.045	0.232
Empowerment Government Leadership -> Regional Performance Leadership	0.442	0.453	0.105	4.209	0.000	0.232
Empowerment Government Leadership -> Co-Innovation Program Leadership -> Regional Performance Leadership	-0.378	-0.385	0.191	1.980	0.048	0.232

Source: Data Processing (2024)

Table 5 shows that the influence of co-innovation program leadership on regional performance leadership is significant with a p-value <0.05 , which is 0.045. The original sample estimate value is negative, which is -0.423, indicating that the direction of the influence of co-innovation program leadership on regional performance leadership is negative. The influence of empowerment government leadership on regional performance leadership is significant with a p-value <0.05 , which is 0.000. The original sample estimate value is positive, which is 0.442, indicating that the direction of the influence of empowerment government leadership on regional performance leadership is positive. The influence of empowerment government leadership through co-innovation program leadership on regional performance leadership is significant with a p-value <0.05 , which is 0.025. The original sample estimate value is positive, which is 0.121, indicating that the direction of the influence of supply chain integration program on business performance is positive.

Hypothesis Testing 2

Table 6.
Hypothesis Testing 2

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	R Square
Co-Innovation Program Leadership - > Regional Performance Leadership	-0.328	-0.344	0.155	2.117	0.034	0.295
Collaborative Strategy Leadership -> Regional Performance Leadership	0.513	0.533	0.089	5,774	0.000	0.295
Collaborative Strategy Leadership -> Co- Innovation Program Leadership -> Regional Performance Leadership	-0.274	-0.288	0.131	2.100	0.036	0.295

Source: Data Processing (2024)

As shown in Table 6, the analysis results show that the relationship between Co-Innovation Program Leadership and Regional Performance Leadership has a significant adverse effect, with a p-value of 0.034 ($p < 0.05$) and an original sample value of -0.328. This means that an increase in the leadership of the joint innovation program decreases the performance of regional leadership. This indicates that the co-innovation program requires additional mechanisms so that the resulting synergy truly supports the achievement of regional leadership performance. Meanwhile, the direct relationship between Collaborative Strategy Leadership and Regional Performance Leadership shows a strong positive effect with an original sample value of 0.513 and a p-value of 0.000. These results underline those collaborative strategies in leadership can directly improve regional performance through a more integrative and planned approach.

Hypothesis Testing 3

Based on the results of the decision on hypothesis 3 (three), regional government performance is directly influenced by collaborative strategies and government empowerment. As seen in the

relationship between variables based on the summary of the following parameter estimation results.

Table 7.
Hypothesis Testing 3

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	R square
Collaborative strategy leadership -> regional performance leadership	0.476	0.497	0.096	4.953	0.000	0.246
Empowerment government leadership -> regional performance leadership	0.244	0.243	0.166	1,472	0.141	0.246
Collaborative Strategy Leadership -> Empowerment Government Leadership -> Regional Performance Leadership	0.201	0.203	0.141	1,426	0.154	0.246

Source: Data Processing (2024)

As shown in Table 7, the results of the analysis show that the relationship between Collaborative Strategy Leadership and Regional Performance Leadership has a significant positive influence with an original sample value of 0.476 and a p-value of 0.000 ($p < 0.05$). This shows that the application of collaborative strategies in leadership can significantly improve regional leadership performance. This strategy has a positive impact on the effectiveness of regional management because it involves broader collaboration between stakeholders, which can accelerate decision making and policy implementation. On the other hand, the relationship between collaborative strategy leadership and regional performance leadership empowerment government towards leadership regional performance. shows the original value sample of 0.244 with a p-value of 0.141, which is greater than 0.05. This means that the influence of government empowerment leadership on regional leadership performance is not statistically significant.

Hypothesis Testing 4

Based on the results of the decision on hypothesis 4 (four), regional government performance is influenced by collaborative strategies directly and through co-innovation and government empowerment, as seen in the relationship between variables based on the summary of the following parameter estimation results:

Table 8.
Hypothesis Testing 4

	Original sample (o)	Sample meaning (m)	Standard deviation (stdev)	T statistics (o/stdev)	P values	R Square
Co-innovation program leadership -> regional performance leadership	-0.675	-0.683	0.208	3.249	0.001	0.297
Collaborative strategy leadership -> regional performance leadership	0.461	0.474	0.106	4.346	0.000	0.297
Empowerment government leadership -> regional performance leadership	0.152	0.140	0.167	0.908	0.182	0.297
Collaborative Strategy Leadership -> Empowerment Government Leadership -> Co- Innovation Program Leadership -> Regional Performance Leadership	-0.349	-0.353	0.121	2,876	0.002	0.297

Source: Data Processing (2024)

As shown in Table 8, the results of the analysis show several important relationships between leadership variables and regional performance. First, Co-Innovation Program Leadership has a significant negative effect on Regional Performance Leadership, with an original sample value of -0.675 and a p-value of 0.001 ($p < 0.05$). This indicates that a joint innovation program in the context of leadership can reduce regional performance. This decline may occur due to the complex implementation of innovation or the lack of regional readiness to integrate the innovation. In contrast, Collaborative Strategy Leadership significantly affects Regional Performance Leadership, with an original sample value of 0.461 and a p-value of 0.000. This effect indicates that structured and effective collaboration between various parties improves regional performance, for example through more efficient joint decision-making.

Hypothesis Testing 5

Based on the results of the decision on hypothesis 5 (five), collaborative strategies are directly influenced by geopolitics, government policies and bureaucratic leadership. as seen in the relationship between variables based on the summary of the following parameter estimation results:

Table 9.
Hypothesis Testing 5

		Original sample (O)	Sample means (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values	R square
Geopolitics Collaborative Strategy Leadership	->	0.321	0.326	0.145	2.214	0.027	0.731
Government Policy -> Collaborative Strategy Leadership		-0.031	-0.028	0.089	0.351	0.726	0.731
Bureaucratic Leadership -> Collaborative Strategy Leadership		0.589	0.586	0.103	5,693	0.000	0.731

Source: Data Processing (2024)

As shown in Table 9, Geopolitics has a positive and significant influence on Collaborative Strategy Leadership, with a p-value less than 0.05, confirming that geopolitical dynamics, such as regional stability, inter-state relations, and global political conditions, significantly impact the adoption of collaborative strategies by leaders. The original sample coefficient of 0.321 indicates a moderate influence, suggesting that a conducive geopolitical environment can enhance the ability of leadership to foster effective cooperation with multiple stakeholders, including the government, private sector, and civil society. This finding highlights the importance of stable geopolitical conditions in strengthening collaborative governance and promoting regional cooperation.

Discussion

The Influence of Co-Innovation Program Leadership on Regional Performance Leadership Directly and Through Empowerment Government Leadership

The results of hypothesis testing indicate that regional performance is influenced by two main variables: Co-Innovation Program Leadership and Empowerment Government Leadership. Implementing the Co-Innovation Leadership Program has a significant effect on regional performance, although the direction of influence tends to be negative. This finding aligns with previous research that highlights the strategic role of innovative leadership and empowerment in improving public sector performance. (Tie, 2020) suggests that leaders who actively promote innovation through empowering strategies can create a work environment that supports growth and operational efficiency. This approach optimizes resource allocation and encourages active participation across all organizational levels, leading to overall performance improvement.

The Influence of Collaborative Strategy Leadership on Regional Performance Leadership Directly and Through Co-Innovation Program Leadership

The results of hypothesis testing indicate that collaborative strategy leadership significantly influences regional leadership performance through both direct and indirect pathways via the co-innovation program. The direct application of collaborative strategies has been proven to enhance performance by facilitating intensive communication, cross-stakeholder coordination, and synergy in decision-making. This approach enables more efficient resource allocation and a quicker response to environmental changes, resulting in substantial improvements in regional leadership performance.

A review of the literature provides a strong theoretical foundation for these findings. (Kulin, 2020) indicates that directly implemented collaborative strategies contribute more significantly to organizational performance improvement compared to complex co-innovation mechanisms. These findings have high practical implications for developing leadership and innovation management models in the public sector.

The Influence of Collaborative Strategy Leadership on Regional Government Performance Directly and Through Empowerment Government Leadership

The results of hypothesis testing suggest that the direct implementation of collaborative strategies significantly influences regional leadership performance. This strategy emphasizes stakeholder integration and synergy in decision-making, which improves regional governance effectiveness through better information flow and operational coordination. A structured collaborative approach enables the formation of responsive mechanisms that adapt to external dynamics, ensure timely and efficient policy implementation. This supports the theory that intensive collaboration in policy planning and execution is crucial for enhancing public sector performance, as stated by (Su, 2023).

However, the empowering government variable does not significantly affect regional leadership performance directly or as a mediating pathway between collaborative strategy and performance. Although empowerment is theoretically expected to enhance internal capacity and encourage active participation, empirical findings reveal that structural and bureaucratic obstacles still dominate implementation. This condition prevents the full realization of empowerment's positive potential, making the direct impact of collaborative strategies more prominent in improving regional leadership performance. These findings align with (Zhou, 2022), who highlights the limitations of empowerment due to administrative complexities in public sector organizations.

The practical implications suggest that policymakers should prioritize directly implementing collaborative strategies, focusing on simplifying communication processes, strengthening inter-unit coordination, and enhancing stakeholder participation. While government empowerment remains theoretically valuable, bureaucratic challenges require a review of its implementation mechanisms to be more adaptive and flexible. Future research should explore moderating variables or structural interventions to enhance empowerment effectiveness, ensuring better synergy between collaborative strategies and empowerment in supporting regional leadership performance.

The Influence of Collaborative Strategy Leadership on Regional Government Performance Directly and Through Co-Innovation Program Leadership and Empowerment Government Leadership

The results of hypothesis testing reveal that regional leadership performance is influenced by various leadership approaches with significant differences in direction and impact strength. Direct implementation of Collaborative Strategy Leadership contributes positively to performance, indicating that structured collaboration involving multiple stakeholders accelerates decision-making, enhances information flow, and optimizes operational coordination in regional governance. Conversely, the implementation of the Co-Innovation Leadership Program shows a significantly negative impact, suggesting that the complexity of joint innovation and structural unpreparedness pose obstacles to policy integration, thereby reducing performance.

The Empowerment Government Leadership variable does not show a significant impact, either directly or through mediation, implying that existing empowerment mechanisms have not effectively addressed bureaucratic and structural constraints. Furthermore, the mediation pathway integrating Empowerment Government and Co-Innovation Program Leadership produces a significant negative effect, indicating that additional mediation layers in the coordination process may reduce expected synergies from collaborative strategies.

Theoretical reviews support these findings. (Zaremba, 2021) states that joint innovation programs can have negative impacts if implementation challenges, such as lack of training and resistance to change, are not regularly addressed. The practical implications emphasize the need to simplify implementation mechanisms to improve regional leadership performance. Strengthening direct collaborative strategy implementation should be prioritized to enhance coordination, streamline information flow, and optimize stakeholder decision-making processes. Additionally, structural reforms in empowerment mechanisms must be carried out to prevent bureaucratic barriers from diminishing the effectiveness of joint innovation efforts. With a combined leadership variable contribution of 29.7% to regional performance, these empirical findings underscore the importance of integrating these approaches. However, their success depends heavily on the ability to manage operational complexities effectively. Future research should explore moderating variables or structural interventions that enhance synergy between leadership strategies, innovation, and empowerment within public sector governance.

The Influence of Geopolitics, Government Policy, and Bureaucratic Leadership on Collaborative Strategy Leadership

The results of hypothesis testing indicate that the implementation of collaborative leadership strategy in regional governance is significantly influenced by several external and internal variables, namely geopolitics, government policy, and bureaucratic leadership. The analysis shows that geopolitics has a significant positive effect on collaborative strategy leadership, with an original sample value of 0.321 and a p-value of 0.027. This suggests that geopolitical dynamics, including regional stability, international relations, and global political conditions, serve as catalysts for adopting collaborative strategies by regional leaders. A conducive geopolitical environment facilitates cross-border cooperation and expands networks, enabling leaders to implement more effective collaborative strategies in governance.

CONCLUSIONS

This study concludes that regional governance leadership is significantly influenced by Co-Innovation Program Leadership, Collaborative Strategy Leadership, and Empowerment Government Leadership, with Collaborative Strategy Leadership showing the strongest positive effect on performance, primarily driven by Bureaucratic Leadership ($O = 0.589$, $T = 5.693$, $p = 0.000$), and an R-square value of 0.731, indicating that 73.1% of the variance in collaborative strategy leadership is explained by geopolitics, government policy, and bureaucratic leadership. In contrast, Co-Innovation Program Leadership negatively impacts performance due to structural and implementation challenges, while Empowerment Government Leadership lacks significant influence, likely due to bureaucratic barriers. Among the external and internal drivers, only geopolitics has a statistically significant effect on collaborative strategy leadership ($O = 0.321$, $T = 2.214$, $p = 0.027$). In contrast, government policy does not ($O = -0.031$, $T = 0.351$, $p = 0.726$), highlighting the critical role of geopolitical dynamics in enabling effective regional leadership strategies.

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