



THE EFFECT OF GOOD GOVERNANCE ON FOOD SECURITY IN INDONESIA: AN EMPIRICAL ANALYSIS

Jhon Hendra^{1)*}, Sri Pratiwi Saraswati Dewi¹⁾, Septia Wahyu Elda¹⁾, Suryandaru¹⁾

¹⁾ Faculty of Economics and Management, IPB University, Bogor, Indonesia

*Corresponding author: hendrajhon@apps.ipb.ac.id

ARTICLE INFO

Article history

Received : 25 June 2025

Revised : 10 October 2025

Accepted : 10 December 2025

Keywords

Control of Corruption;

Food Security;

Good Governance;

Government Effectiveness;

Political Stability

JEL classification

H11; O43; Q18

ABSTRACT

This study aims to analyze the influence of good governance on food security in Indonesia using time-series data from 2002 to 2023. The good governance indicators employed include government effectiveness, control of corruption, and political stability, while food security is measured by the Food Consumption Pattern Score (Pola Pangan Harapan, PPH). The regression analysis results show that the model is statistically significant, with a coefficient of determination (R^2) of 92%, indicating that a substantial proportion of the variation in food security can be explained by the good governance variables. Individually, all three independent variables have a significant effect on food security (t-test, $p < 0.05$), with government effectiveness exhibiting the strongest contribution. These findings reinforce the qualitative analysis that improving bureaucratic capacity, strengthening anti-corruption oversight, and maintaining political stability are important prerequisites for building an equitable and resilient food system. Corrupt practices in food procurement, bureaucratic inefficiencies, and policy fluctuations driven by political instability have so far weakened food security, especially among vulnerable groups. Therefore, institutional improvements in good governance, through strengthened regulations, public accountability, and community participation, represent key strategies for sustainably enhancing Indonesia's food security.

This is an open-access article under the [CC-BY 4.0](https://creativecommons.org/licenses/by/4.0/) license.



1. INTRODUCTION

Food security is a driver of sustainable development, as it underpins economic growth, social equity, and environmental health, making it a priority for national governments to address through comprehensive strategies and policies (Loginov, 2024). It is not only concerned with the availability of food, but also encompasses access, distribution, stability, and the quality of food consumption among the population. In Indonesia, food security has become a strategic agenda regulated through various national policies, such as Law of the Republic of Indonesia Number 18 of 2012 on Food (2012) and Government Regulation (PP) Number 17 of 2015 on Food Security and Nutrition (2015). However, several structural challenges remain, particularly in the context of governance, which has not yet fully supported the achievement of equitable and sustainable food security.

Governance issues such as weak government effectiveness, high levels of corruption, and political instability have contributed to the challenges in achieving food security in Indonesia. Inequities in food distribution, the mis-targeting of food assistance programs, and the low quality of bureaucracy hinder the implementation of food security policies. According to the 2022 Global Food Security Index (GFSI), Indonesia ranked 63rd out of 113 countries, with a score reflecting significant disparities in food access across regions (The Economist Group, 2022). On the other hand, Indonesia's Corruption Perceptions Index remains stagnant at 34 out of 100, according to Transparency International (2024), indicating that corruption continues to be a serious issue in public sector management, including the food sector.

In this context, it is important to examine the relationship between the principles of good governance and food security in Indonesia. Three key dimensions of good governance that are considered influential include government effectiveness, control of corruption, and political stability and absence of violence. This study aims to assess the extent to which these three variables contribute to national food security, as measured by the Food Consumption Diversity Score (Pola Pangan Harapan/PPH) over the period from 2002 to 2023.

Several previous studies have demonstrated that the quality of governance plays a crucial role in supporting food security, through policies related to distribution, agricultural subsidies, and price regulation (Fan & Brzeska, 2014; Kaufmann et al., 2009). This study develops the following hypotheses: (1) higher government effectiveness is positively correlated with improved PPH scores; (2) stronger control of corruption enhances efficiency and transparency in the implementation of food programs; and (3) sustained political stability fosters a conducive environment for investment in the food sector and ensures food availability.

Using a quantitative approach through simple linear regression (OLS), supported by descriptive and interpretative analysis of policy dynamics and institutional indicators, this study aims to contribute evidence-based policy recommendations. The expected outcome is a more comprehensive understanding of the role of good governance in strengthening national food security, while also supporting the formulation of more effective, transparent, and inclusive policies in the future.

2. RESEARCH METHODS

This study employs a quantitative approach with an explanatory research design to examine the relationship between good governance indicators and food security in Indonesia. The scope of the research covers the national level, with an observation period spanning 22 years, from 2002 to 2023. The study focuses on national food security indicators represented by the Food Consumption Diversity Score (Pola Pangan Harapan/PPH), along with three key governance indicators obtained from the Worldwide Governance Indicators (2025) published by the World Bank: government effectiveness, control of corruption, and political stability and absence of violence (Gujarati & Porter, 2009).

The data used in this study are secondary time-series data obtained from the World Bank and Statistics Indonesia (BPS). The PPH data represent the quality of food consumption among the Indonesian population based on the diversity and ideal proportion of various food groups. Meanwhile, governance indicators are presented as annual scores for each WGI variable. Government effectiveness reflects the quality of public services and policy implementation; control of corruption measures the extent to which public power is misused for private gain; and political stability indicates the likelihood of political instability or violence.

The analytical method employed is simple linear regression (Ordinary Least Squares/OLS), aimed at examining the individual influence of each good governance indicator on the PPH. The analysis was conducted using Microsoft Excel software, complemented by descriptive interpretative analysis. The regression model used is as follows:

$$PPH_t = \alpha + \beta_1 GE_t + \beta_2 CC_t + \beta_3 PS_t + \varepsilon_t \dots\dots\dots(1)$$

Description :

PPH	: Food Consumption Diversity (Pola Pangan Harapan) Score
GE	: Government Effectiveness (Index)
CC	: Control of Corruption (Index)
PS	: Political Stability and Absence of Violence (Index)
α	: Intercept
β	: Coefficient of Independent Variable (n = 1, 2, ...)
ε	: Error term
t	: Time series (Years 2002-2023)

The validity of the model was tested through normality test, homoscedasticity test, autocorrelation test, and multicollinearity test. If the Variance Inflation Factor (VIF) value is less than 10, it is concluded that multicollinearity is not present in the model. After these diagnostic tests, the regression results were interpreted using the t-test to assess the significance of each individual variable, the F-test to examine the overall significance of the model, and the R-squared (R^2) and Adjusted R^2 values to measure the proportion of variance in the dependent variable that can be explained by the independent variables in the model (Gujarati & Porter, 2009).

3. RESULTS AND DISCUSSION

Panel Data Regression

Statistically, the regression model performs very well, as indicated by an R-squared value of 0.92, meaning that approximately 92 percent of the variation in the dependent variable (Food Consumption Diversity Score) can be explained by the independent variables analyzed. The Adjusted R-squared value of 0.91 indicates that the model's explanatory power remains high even after adjusting for the number of variables. The F-test yields a value of 72.74 with a significance level of 0.000, indicating that the overall model is statistically significant and effectively explains the relationships among the variables. The regression results are presented in Table 1.

Table 1. Results of the Panel Data Regression

Variable	Coefficient	Probability
GE	0.237***	0.008
CC	0,360***	0.000
PS	- 0,296***	0.007
	0.237***	0.008
<i>R-squared</i>		0.924
<i>F-statistic</i>		0.0000

Notes: Dependent Variable: LPPH; ***p < 0.01, significant at the 1% level ($\alpha = 0.01$)

Sources: Processed data (2025)

The goodness-of-fit of the model was assessed using the F-statistic, t-statistics, and R-squared values. The F-statistic is significant at the 1% level, indicating that the independent variables jointly have a significant effect on the Food Consumption Diversity Score (as a proxy for food security). The significance of the t-statistics for each independent variable shows that each governance index, government effectiveness, control of corruption, and political stability, has a statistically significant partial effect on food security. The specific influence of each variable on food security is detailed as follows.

Government Effectiveness

The regression coefficient for the variable government effectiveness (GE) is 0.237, which is positive and statistically significant. This implies that a 1% increase in government effectiveness leads to a 0.237% improvement in food security, ceteris paribus.

This finding indicates that the quality of bureaucracy and the institutional capacity of the government are strongly correlated with food security, encompassing aspects of availability, accessibility, utilization, and stability. Government effectiveness has been a central topic in the study of governance and public policy, particularly in the context of achieving the Sustainable Development Goals (SDGs).

In the context of Indonesia, government effectiveness is a key factor in determining the success of national food security programs. The Ministry of Agriculture, the National Food Agency, and various regional government institutions play strategic roles in formulating and implementing food policies. One example is the provision of high-quality seed assistance and fertilizer subsidies aimed at increasing the productivity of smallholder farmers. However, the effectiveness of such programs heavily depends on the capacity of local bureaucracies to identify eligible beneficiaries, manage logistics, and conduct monitoring and evaluation. In several cases, weak inter-agency coordination and limited data availability have led to mistargeted interventions and reduced policy impact.

The government effectiveness index in Indonesia, as measured by the World Bank, shows an upward trend, from approximately -0.5 in 2002 to above 0.0 in 2023 (with positive values indicating improvement). This increase in the score suggests significant progress in the government's capacity to design and implement effective public policies, including in strategic sectors such as food. Improvements in government effectiveness have a significant impact on the food sector. Food policy is cross-sectoral in nature and highly dependent on inter-agency coordination, policy consistency, and bureaucratic efficiency. Therefore, enhancing the quality of governance will strengthen the resilience of the national food system against various shocks in terms of production, distribution, and consumption. A detailed overview of the development of Indonesia's government effectiveness index is presented in Figure 1.

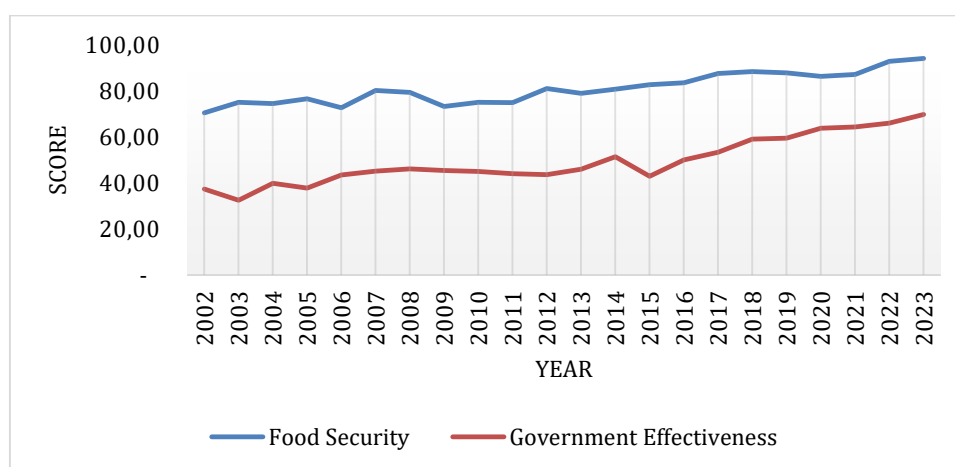


Figure 1. Graph of the Relationship between Government Effectiveness Index and Food Security

As shown in Figure 1, the period from 2002 to 2023 reveals a significant upward trend in two key indicators: the Food Consumption Diversity Score (PPH) and the Government Effectiveness Index. Government effectiveness reflects the quality of governance, particularly in terms of public service delivery, policy implementation, and government credibility. In the early years of observation (2002 to around 2010), the PPH ranged from 70 to 80, while the governance effectiveness index was relatively low, between 32 and 46. This condition illustrates the challenges in food policy implementation and suboptimal governance, which affected the population's food consumption patterns. However, since 2012, both indicators have shown a continuous and mutually reinforcing upward trend. The PPH increased from around 81 in 2012 to over 94 in 2023. At the same time, the governance effectiveness index rose significantly from approximately 43 in 2012 to

nearly 70 in 2023. This indicates that improvements in governance have had a positive impact on the quality and diversity of food consumption among the population.

The positive relationship between government effectiveness and food security aligns with the findings of the FAO's (2018) report. This report states that countries with efficient governance systems perform significantly better in maintaining national food supplies, including during periods of global market volatility. Government effectiveness is reflected in a country's ability to provide well-targeted subsidies and incentives to farmers, promote agricultural research and innovation, and manage logistics and supply chains efficiently.

Furthermore, according to the study by Keefer & Khemani (2005), the relationship between democratic systems and the allocation of public expenditures, particularly in the provision of services that affect the welfare of the poor, is examined. The study finds that strong state institutions are closely linked to a government's ability to distribute resources equitably and reduce inequality. In the context of Indonesia, programs such as Raskin (Rice for the Poor) and BPNT (Non-Cash Food Assistance) serve as examples of how the success or failure of food programs largely depends on the capacity of local governments to implement them fairly and accurately. When local governments are weak in planning and oversight, food assistance leakages and mistargeting become unavoidable consequences.

The study by Gisselquist & Resnick (2014) highlights that government effectiveness is strongly influenced by the presence of accountability mechanisms and public participation in the delivery of public services. Government effectiveness is not only measured by the technical capacity of the bureaucracy to perform its functions, but also by how open and accountable government institutions are to public oversight.

Meanwhile, the FAO, IFAD, and WFP's (2013) report emphasizes that a country's success in reducing hunger does not solely depend on economic growth or food production, but is strongly influenced by the effectiveness of government in designing and implementing coordinated, responsive, and inclusive public policies. Countries with effective government institutions tend to be more successful in maintaining food price stability, expanding the reach of social assistance programs, and building resilient food systems amid economic shocks and global crises.

Thus, government effectiveness plays a crucial role in strengthening food security across multiple dimensions. The relationship between the two is not merely linear but is shaped through various institutional synergies and integrations, such as program efficiency, data accuracy, technical capacity, and institutional strength. Food security is not solely a matter of agricultural or logistical concerns, but fundamentally an institutional issue that requires adaptive, responsive, and credible governance. Therefore, strategies to develop food security in Indonesia must be accompanied by bureaucratic reform, the strengthening of government management systems, and the enhancement of both the technical and moral capacity of public officials. Without these elements, achieving sustainable food security will remain difficult, and disparities in access to and consumption of healthy food will continue to pose structural challenges that hinder the attainment of national development goals.

Corruption Control

The regression coefficient for the variable corruption control (CC) is 0.360, which is positive and statistically significant. This implies that a 1% increase in corruption control leads to a 0.360% improvement in food security, *ceteris paribus*.

The development of corruption control and its impact on food security in Indonesia shows a significant upward trend from 2002 to 2023 in both the Food Consumption Diversity Score (PPH) and the Corruption Control Index. The corruption control index increased from a score of 8.47 in 2002 to 60.85 in 2023. This trend suggests a positive relationship between improved corruption control and better food consumption patterns among the population. High levels of corruption in the early 2000s hindered the disbursement of funds for food security programs and limited investment in the agricultural sector, which negatively affected food consumption patterns. The relationship between corruption control and food security is illustrated in Figure 2.

Various empirical studies support the findings on the relationship between corruption control and food security. The FAO's (2018) report not only discusses food security in general, but also highlights the significant impact of corruption on efforts to achieve food security. In this report, the FAO emphasizes that corruption is one of the main obstacles hindering the effectiveness of food programs and the distribution of resources in many countries, particularly in developing nations. Corruption in the food sector often leads to the misappropriation of subsidy funds, the embezzlement of food aid, and distortions in supply chains, resulting in unequal food access for vulnerable groups.

The FAO explains that corruption undermines transparency and accountability in the management of the food sector, resulting in funds and aid that are intended for the poor and vulnerable being delayed or misappropriated. This condition not only worsens food insecurity but also erodes public trust in the government and food-related institutions. Therefore, the SOFI 2018 report emphasizes the importance of strengthening mechanisms for corruption control, enhancing transparency, and promoting community participation in monitoring food programs as critical steps toward improving governance and achieving sustainable food security.

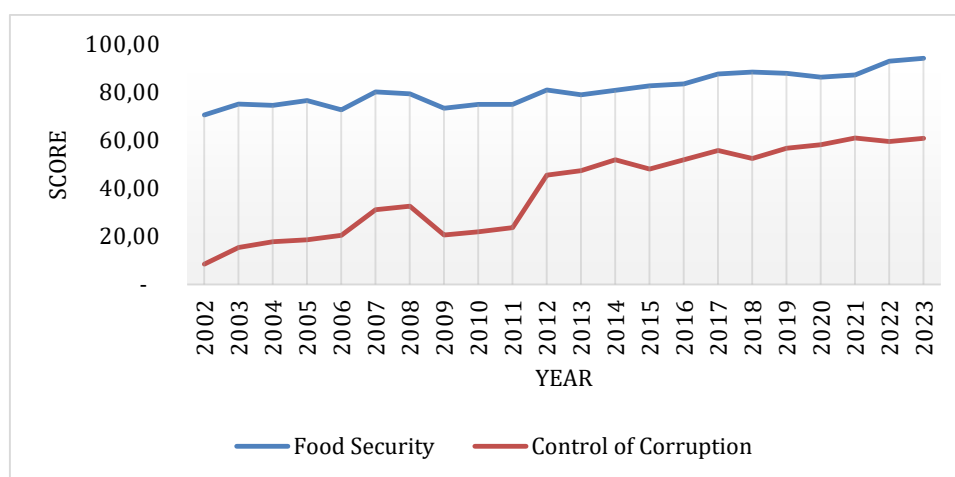


Figure 2. Relationship between the Control of Corruption Index and Food Security

The FAO states that countries with strong corruption control tend to have more efficient food distribution systems and more accurately targeted social assistance. In this context, effective corruption control enables governments to allocate subsidies and food aid directly to farmers and vulnerable groups without harmful leakages. As a result, levels of food insecurity decrease, and the nutritional status of the population improves.

The World Bank, in its Worldwide Governance Indicators (WGI) 2022 report, also affirms the positive relationship between the quality of corruption control and food security. Countries with high corruption control scores are better able to manage food-related risks and implement effective interventions during crises such as pandemics or global food price shocks. In contrast, countries with high levels of corruption face challenges in food distribution, leading to inequality and rising hunger rates.

The findings of the FAO and the World Bank are consistent with the study by Kaufmann et al. (2009). This research developed the widely recognized framework known as the Worldwide Governance Indicators (WGI), which covers six key dimensions of governance: voice and accountability, political stability and absence of violence, government effectiveness, regulatory quality, rule of law, and control of corruption. By collecting data from various international organizations and public perception surveys, the researchers compiled a cross-country database that enables longitudinal comparisons of governance performance from 1996 to 2008.

The findings of this study indicate that if corruption control remains weak, several major risks may arise: 1) Food security becomes superficial. Programs designed for price interventions

and supply stability become ineffective due to fund misappropriation and logistical irregularities; 2) Social inequality deepens. Vulnerable groups such as the poor, small-scale fishers, and subsistence farmers become increasingly marginalized as they are unable to navigate a corrupt distribution system; and 3) State legitimacy declines. When citizens lose trust in the government's ability to manage food fairly, they may seek their own solutions, sometimes through shortcuts or even criminal actions.

Thus, the findings of this study underscore the importance of strengthening oversight and anti-corruption mechanisms as an integral part of efforts to build an inclusive and sustainable food security system. Controlling corruption not only improves the efficiency of budget allocation but also directly contributes to enhanced well-being and better food consumption patterns.

Political Stability

Political stability has a regression coefficient of 0.297, which is negative and statistically significant. This means that a 1% increase in political stability is predicted to reduce food security by 0.297%, *ceteris paribus*. At first glance, this finding may appear contradictory to the normative assumption that political stability should create more favorable conditions for improvements in the food sector. However, upon closer examination, there are numerous theoretical, methodological, and contextual factors that can logically and justifiably explain this negative relationship.

As a democratic country with high geographic and social diversity, Indonesia faces unique challenges in maintaining both political stability and food security. Although PPH scores have generally increased since 2002, fluctuations in the political stability index, as shown in the WGI graph, remain a concern. During electoral years, political tensions and elite dynamics often disrupt the focus of food programs, particularly long-term initiatives such as local food diversification, strengthening government food reserves, and reforming food trade systems. The relationship between political stability and food security in Indonesia is illustrated in Figure 3.

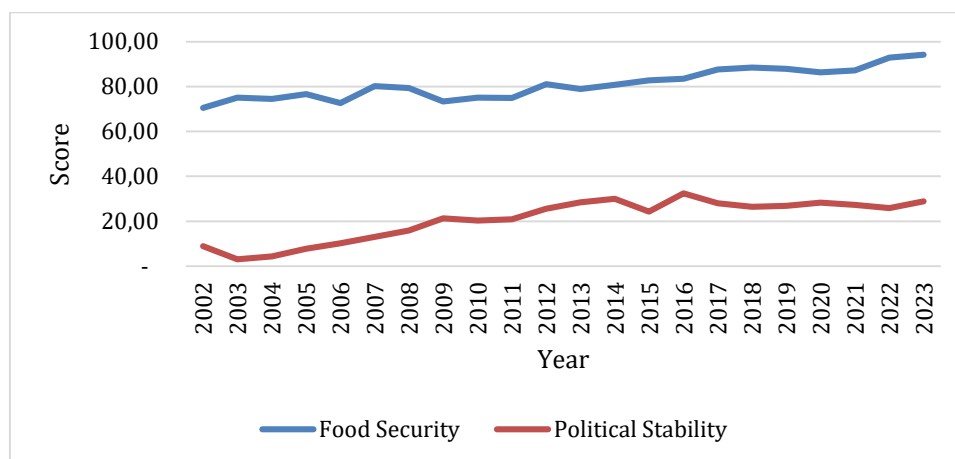


Figure 3. Graph of the Relationship between the Political Stability Index and Food Security

Figure 3 illustrates the dynamics of the relationship between PPH and political stability in Indonesia during the period 2002–2023. The Food Consumption Diversity Score (PPH) is an important indicator that reflects the quality and diversity of the population's food consumption, ideally representing a balanced proportion among staple foods, protein sources, vitamins, and minerals. Over the past two decades, the PPH has shown a relatively consistent increase—from 70.50 in 2002 to 94.10 in 2023. This upward trend reflects an improvement in dietary patterns toward more balanced, diverse, and nutritious food consumption.

However, when compared to the Political Stability Index, which reflects the level of government stability and the risk of political violence and social conflict, a stark contrast becomes apparent. The political stability indicator shows sharp fluctuations. In 2002, Indonesia's stability score was relatively low, reflecting the post-reform era marked by uncertainty.

Stability improved and peaked in 2016, a period that marked the consolidation of democracy and the strengthening of state institutions. After 2016, however, the index stagnated at around 27–30, indicating recurring political tensions such as pre-election polarization, horizontal conflicts, and challenges to civil liberties.

This phenomenon suggests that improvements in the quality of food consumption among the population may occur relatively independently of political stability dynamics. It reinforces the argument that food security is also supported by other factors such as rising incomes, the success of social intervention programs (such as the Non-Cash Food Assistance/BPNT), and the role of markets in providing food diversity. Nonetheless, political stability still has a structural influence on the overall food system, particularly in the context of long-term planning, price control, farmer protection, and the availability of national food logistics. When political stability weakens, there is potential for policy disruption, fragmented inter-agency coordination, and weakened control over corruption practices within the food distribution system.

The situation in Indonesia regarding political stability may affect food security, as reflected in the findings of the FAO's (2016) report. This report highlights the strong link between political conflict, hunger, and global food security. Conflict is identified as one of the primary drivers of acute hunger worldwide, with approximately 60% of the population experiencing food crises in 2017 living in conflict-affected areas.

Moreover, several empirical examples support this possible interpretation. Countries such as Zimbabwe under Mugabe and Venezuela under Maduro exhibited a certain degree of political stability (in the sense of an absence of large-scale uprisings or military coups over a given period), yet simultaneously experienced prolonged food crises due to policy failures, systemic corruption, and weak governance. In this sense, political stability can become a form of “pseudo-stability”, serving to preserve power rather than promoting productive stability that contributes to public welfare.

Furthermore, Candel (2014) systematic review on governance and food security highlights that political stability should be viewed holistically, alongside variables such as political participation, accountability, transparency, and bureaucratic effectiveness. If stability is not accompanied by democratic values and other principles of good governance, it may instead serve to uphold unequal political-economic structures, ultimately hindering the fair distribution of food.

Food security is highly dependent on the quality of public institutions and governance structures. Scholars emphasize that political stability will have a positive impact only when accompanied by appropriate institutional incentives, information transparency, and citizen participation in the policymaking process. Without this combination, stability can become a tool for preserving the status quo, which may harm the food sector, especially in countries that rely heavily on food subsidies but lack transparency in their allocation.

This analysis can also be deepened through a structural approach, particularly from the perspective of political economy and development sociology. In many cases, governments that enjoy high levels of political stability, due to strong control over political and military institutions, have greater freedom to allocate public resources in favor of elites. This exacerbates distributional inequality and creates “zones of exclusion” where poor and marginalized groups lack access to adequate food, both in terms of quantity and quality. In such a model, stability does not contribute to food security because welfare outcomes are not a primary policy priority.

4. CONCLUSION

This study demonstrates that the quality of governance has a significant impact on food security in Indonesia, as measured by the Food Consumption Diversity Score (PPH) over the period 2002–2023. The three good governance indicators analyzed, government effectiveness, control of corruption, and political stability, each show a positive relationship with PPH, albeit with varying degrees of influence.

These findings reinforce the understanding that food security is not determined solely by technical or economic factors, but is also heavily influenced by institutional capacity and the stability of the governance system. The key results of this study indicate that: 1) Political stability is the most influential variable on national food security, highlighting that policy consistency and a secure political environment are essential foundations for a successful food system; 2) Government effectiveness significantly contributes to improving the quality of food consumption, underscoring the importance of a bureaucracy capable of delivering public services efficiently; and 3) Control of corruption also supports food security, although to a lesser extent, suggesting that anti-corruption efforts must be accompanied by comprehensive institutional reform.

Based on the findings, it is recommended that the government focus not only on food availability and distribution but also on strengthening institutional dimensions, particularly in maintaining political stability, enhancing bureaucratic capacity, and intensifying anti-corruption efforts in the food sector. A consistent, transparent, and inclusive food policy must become a national priority to achieve sustainable and equitable food security across all regions of Indonesia.

5. REFERENCES

- Candel, J. J. L. (2014). Food security governance: a systematic literature review. *Food Security*, 6(4), 585–601. <https://doi.org/10.1007/s12571-014-0364-2>
- Fan, S., & Brzeska, J. (2014). Feeding More People on an Increasingly Fragile Planet: China's Food and Nutrition Security in a National and Global Context. *Journal of Integrative Agriculture*, 13(6), 1193–1205. [https://doi.org/10.1016/S2095-3119\(14\)60753-X](https://doi.org/10.1016/S2095-3119(14)60753-X)
- FAO. (2016). Peace and Food Security: Investing in resilience to sustain rural livelihoods amid conflict. In *Investing in resilience to sustain rural livelihoods amid conflict*. <https://openknowledge.fao.org/server/api/core/bitstreams/6a615cc2-b078-4a0f-9a4c-11f9a7886bc7/content>
- FAO. (2018). State of Food Security and Nutrition in the World 2018. In *Building climate resilience for food security and nutrition*. <https://openknowledge.fao.org/server/api/core/bitstreams/f5019ab4-0f6a-47e8-85b9-15473c012d6a/content>
- FAO, IFAD, & WFP. (2013). The State of Food Insecurity in the World 2013. In *The multiple dimensions of food security*. <https://www.fao.org/4/i3434e/i3434e.pdf>
- Gisselquist, R. M., & Resnick, D. (2014). Aiding Government Effectiveness in Developing Countries. *Public Administration and Development*, 34(3), 141–148. <https://doi.org/10.1002/pad.1694>
- Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (5th editio). New York: McGraw-Hill. https://www.cbpbu.ac.in/userfiles/file/2020/STUDY_MAT/ECO/1.pdf
- Kaufmann, D., Kraay, A., & Mastruzzi, M. (2009). Governance matters VII: aggregate and individual governance indicators 1996–2007. In A. Peters, L. Koechlin, T. Förster, & G. F. Zinkernagel (Eds.), *Non-State Actors as Standard Setters* (pp. 146–188). Cambridge University Press. <https://doi.org/10.1017/CBO9780511635519.007>
- Keefer, P., & Khemani, S. (2005). Democracy, Public Expenditures, and the Poor: Understanding Political Incentives for Providing Public Services. *The World Bank Research Observer*, 20(1), 1–27. <https://doi.org/10.1093/wbro/lki002>
- Loginov, D. A. (2024). Food security as a factor of sustainable national economic development. *E3S Web of Conferences*, 537, 04002. <https://doi.org/10.1051/e3sconf/202453704002>
- Law of the Republic of Indonesia Number 18 of 2012 on Food, Lembaran Negara Republik Indonesia Tahun 2012 Nomor 227 (2012). <https://peraturan.bpk.go.id/Details/39100>

- Government Regulation (PP) Number 17 of 2015 on Food Security and Nutrition, (2015). <https://peraturan.bpk.go.id/Details/5581>
- The Economist Group. (2022). *Country report: Indonesia Global Food Security Index 2022*. Economist Impact. <https://impact.economist.com/sustainability/project/food-security-index/explore-countries/indonesia>
- Transparency International. (2024). *Corruption Perceptions Index 2023*. Transparency International. <https://www.transparency.org/en/publications/corruption-perceptions-index-2023>
- Worldwide Governance Indicators. (2025). *Control of Corruption, Government Effectiveness, Political Stability: Percentile Rank – Indonesia*. World Bank. <https://databank.worldbank.org/source/worldwide-governance-indicators>