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Prabowo's Nutritious Meals: Key to Sustainability of Food Estate Program

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ABSTRACT: The Food Estate program was initiated to support national food security by enhancing food production on peatlands. However, its implementation faces various challenges, including difficult land conditions and the need for adequate infrastructure. This study aims to identify key factors influencing the sustainability of the Food Estate program in Central Kalimantan, particularly in the Kapuas and Pulang Pisau districts. This study employs the MICMAC method (Matrix of Crossed Impact Multiplications Applied to a Classification) to analyze the impact of strategic variables, such as government policy, infrastructure, institutional support, and local economy. The findings indicate that government policy and infrastructure support are dominant factors affecting the program's success, while variables like local economy and farmers' income heavily depend on these factors. Recommendations include the need for sustainable policy enhancement, development of supporting infrastructure, improved market access, and adaptive technology training for farmers. With optimal implementation, the Food Estate program is expected to not only enhance national food security but also foster economic growth and improve the welfare of local communities in Central Kalimantan.

Keywords: Food Estate, Free Lunch, MicMac, Influence, Borneo Island.

***ABSTRAK**: Program Food Estate diinisiasi untuk mendukung ketahanan pangan nasional dengan meningkatkan produksi pangan di lahan gambut. Namun, implementasinya menghadapi berbagai tantangan, termasuk kondisi lahan yang sulit dan kebutuhan akan infrastruktur yang memadai. Penelitian ini bertujuan untuk mengidentifikasi faktor-faktor kunci yang memengaruhi keberlanjutan program Food Estate di Kalimantan Tengah, khususnya di Kabupaten Kapuas dan Pulang Pisau. Penelitian ini menggunakan metode MICMAC (Matrix of Crossed Impact Multiplications Applied to a Classification) untuk menganalisis dampak variabel strategis, seperti kebijakan pemerintah, infrastruktur, dukungan kelembagaan, dan ekonomi lokal. Temuan penelitian menunjukkan bahwa kebijakan pemerintah dan dukungan infrastruktur merupakan faktor dominan yang memengaruhi keberhasilan program, sementara variabel seperti ekonomi lokal dan pendapatan petani sangat bergantung pada faktor-faktor tersebut. Rekomendasi yang diberikan mencakup perlunya peningkatan kebijakan yang berkelanjutan, pengembangan infrastruktur pendukung, peningkatan akses pasar, dan pelatihan teknologi adaptif bagi petani. Dengan pelaksanaan yang optimal, program Food Estate diharapkan tidak hanya meningkatkan ketahanan pangan nasional, tetapi juga mendorong pertumbuhan ekonomi dan meningkatkan kesejahteraan masyarakat lokal di Kalimantan Tengah.*

***Kata Kunci:** Food Estate, Free Lunch, MICMAC, Pengaruh, Pulau Kalimantan.*

INTRODUCTION

The Food Estate program is a strategic initiative by the Indonesian government aimed at addressing long-term food security by developing large-scale agricultural areas to boost national food production. This program focuses on optimizing underutilized land to produce staple crops, ensuring a consistent food supply and reducing dependence on imports. In Central Kalimantan, specifically in Kapuas and Pulang Pisau districts, the program utilizes vast tracts of land, with 164,598 hectares in Pulang Pisau and 293,488 hectares in Kapuas identified for potential development. These lands are targeted for cultivating essential food commodities such as rice, corn, and cassava, which are vital to meeting the nation's food needs. The initiative not only seeks to improve agricultural productivity but also aims to create employment opportunities, strengthen local economies, and enhance infrastructure in rural areas. However, the program also faces significant challenges, including the need for sustainable land management, adaptation to peatland conditions, and comprehensive support for farmers in the form of technology, market access, and training. By addressing these challenges, the Food Estate program aspires to become a cornerstone in achieving national food security and fostering regional economic growth.

The Food Estate Program in Central Kalimantan is expected to make a significant contribution to Indonesia's food security, especially in supporting the grand vision of national food security and improving community nutrition through the provision of quality food. In addition, the program is also expected to reduce dependence on food imports and improve the welfare of local communities through job creation and regional economic improvement (Coordinating Ministry for Economic Affairs, 2021).

However, the implementation of the Food Estate in Central Kalimantan faces various challenges. The land in the Kapuas and Pulang Pisau regions is mostly peat swamp, which requires special management techniques. Peatlands have different physical and chemical characteristics from mineral soils, such as low pH, high acidity and high organic matter content, which can inhibit plant growth if not managed appropriately (Astutik et al., 2019; Aminuloh et al., 2019). In this case, adequate agricultural technology, including the use of adaptive crop varieties and sustainable land management practices, is an important factor in the success of this program (Bappenas, 2020).

In addition to natural factors, the success of the Food Estate also relies heavily on infrastructure support and sustainable government policies. Infrastructure such as irrigation, roads and storage facilities need to be provided to ensure smooth production, distribution and storage of food products. Data shows that inadequate infrastructure can lead to decreased production and difficulties in distributing agricultural products to the market, which impacts price stability and program sustainability (Ihsannudin et al., 2016; Holilah et al., 2019). In this case, government support through clear policies, sufficient funding, and continuous supervision is needed so that the Food Estate program can run effectively and efficiently (Anwar, 2021).

Several studies have shown that a structured approach to identifying factors affecting the sustainability of food estate programs can provide deep insights. The MICMAC (Matrix of Crossed Impact Multiplications Applied to a Classification) method, introduced by Duperrin and Godet in 1973, has been widely used in analyzing the interrelationships between variables in complex systems, such as food estates. This method allows researchers to map the key factors that influence program sustainability, such as infrastructure support, agricultural technology, local community involvement, and government policies (Durance & Godet, 2011; Soesanto, 2021). In the context of food estates, these variables do not stand alone but interact with each other and have a significant reciprocal influence on the overall success of the program (Sharma et al., 2011; Benjumea-Arias et al., 2016).

Policies similar to food estates have been implemented in various countries, including China, India, Brazil, and Ethiopia, with varying levels of success. In China, large-scale agricultural zones supported by advanced technology and government subsidies have significantly boosted food production. However, in Ethiopia, similar programs faced challenges due to inadequate infrastructure, low community engagement, and environmental degradation, leading to mixed results. The success or

failure of such programs often depends on factors like the alignment of policies with local needs, community involvement, effective resource management, and long-term sustainability plans.

In Indonesia, food estate programs are primarily distributed in regions with vast agricultural potential, such as Central Kalimantan, North Sumatra, East Nusa Tenggara, and Papua. This study focuses on Kapuas and Pulang Pisau in Central Kalimantan due to their strategic importance in the government's vision for food security. The selection of these locations is based on their relatively large land availability, fertile soil, and alignment with national priorities. Additionally, these regions serve as critical test cases for evaluating the feasibility and scalability of the food estate initiative across Indonesia.

This study aims to explore the key factors that influence the sustainability of the Food Estate program in Central Kalimantan and how it can support Prabowo's vision of food security and nutritious eating initiatives. Using the MICMAC approach, this study identifies strategic variables that can support the sustainability of the Food Estate in Kapuas and Pulang Pisau. The results of this study are expected to provide strategic recommendations for the government and relevant stakeholders to improve the effectiveness and efficiency of the program so that the Food Estate can contribute to providing quality and affordable food for the people of Indonesia.

METHODS

Kapuas Regency and Pulang Pisau Regency. The categories of data collected are primary and secondary data. There are six dimensions that become the reference in building attributes or variables, namely: reinforcing factors, human resources (HR), market, environment, economic sustainability, and social sustainability, as shown in Table 1. The attributes or variables used to build the questionnaire were derived from the results obtained, such as food estate policymakers in agriculture in the Central Kalimantan region, related agencies (local government) directly from in-depth interviews, Focus Group Discussions (FGD), and direct observation. Extracting information through questionnaires was carried out on stakeholders, especially the agriculture office, Local Parliament, rice industry, farmers, extension workers, and expert respondents. Implementation of questionnaires describing the direct relationship between variables was done by quantifying the use of a scale of 0 to 3 and P as illustrated by Godet (1994).

In this study, interviews were conducted with 30 participants per village, including farmers, farmer group administrators, and agricultural extension workers. Observations were carried out twice after the harvest season, focusing on all relevant aspects, such as economic, political, agricultural, and other sustainability dimensions. The observation approach was non-participatory, allowing researchers to examine the implementation without direct involvement.0 = no relationship (non-existent).

1 = weak relationship (low direct influence)

2 = equal relationship (medium direct influence)

3 = strong relationship (high direct influence)

P = potential influence

The process of analyzing the data from filling out the questionnaire using MICMAC is by converting the weight of each variable into a matrix of direct influence (MDI) as presented in Table 2. According to Fauzi, (2019) the stages of MICMAC analysis are based on two main stages. The first stage is understanding the scope of the problem and the system to be studied. The flow of analysis using MICMAC can be seen in Figure 1. The next stage is to analyze the intensity of influence and dependence between variables determined by the location of variables on the quadrant map as shown in Figure 2.

Table 1. Tabulation of the Relationship Between Influence and Dependence

Dimensional	Variables/ Attribute	Short Labels
Amplifying Factor	*Kelembagaan* (Institution)	Klbg(Inst)
	Infrastruktur (Infrastructure)	Ifst(Infr)
	Perekonomian Lokal (Local Economy)	PeLo(Econ)
	Kebijakan Pemerintah (Government Policy)	Kebj(GovPol)
	Modal Usaha (Business Capital)	Md(Cap)
	Teknologi Pertanian (Agricultural Technology)	Tekn(AgTech)
Human Resources	*Tingkat Pendidikan* (Level of Education)	TiP(Educ)
	Pengalaman Petani (Farmer Experience)	Pglm(Exp)
	Pembinaan & Pelatihan Petani (Farmer Training and Guidance)	Pmbn(Train)
Market	*Akses Pasar* (Market Access)	Aks(MktAcc)
	Harga Produk (Product Price)	Hrg(ProdPrice)
	Distribusi (Distribution)	Dtbs(Distrib)
	Pemasaran Hasil Produksi (Product Marketing)	Pmsrn(Mktng)
Environment	*Kualitas Lahan* (Land Quality)	Klt(LandQlty)
	Ketersediaan Air (Water Availability)	AirAvail(Water)
	Kondisi Iklim (Climate Conditions)	Iklm(Climate)
	Pengelolaan Limbah (Waste Management)	Lmbh(WasteMngmt)
Economic Sustainability	*Pendapatan Petani* (Farmer Income)	Pdpt(Income)
	Pengembangan Industri Lokal (Local Industry Development)	Pngnd(LocIndDev)
	Keberlanjutan Keuangan (Financial Sustainability)	Kbr(FinSus)
Sosial Sustainability	*Keterlibatan Masyarakat* (Community Involvement)	KtLb(ComInv)
	Keberagaman Pekerjaan (Job Diversity)	Pkrj(DivJobs)
	Akses terhadap Pendidikan (Access to Education)	Aks(PedAccess)

a)KemenristekdiktiBRIN (2019); b) data processed from FGD

RESULTS AND DISCUSSIONS

Matrix of Direct Influence

Based on the results of questionnaire and FGD data processing, there are variables that have been determined and quantified the relationship between variables that have been built so that a direct influence matrix is obtained as shown in Table 1. Through the MICMAC application, Figure 3 in the form of Matrix of Data Influence (MDI) is transformed into a variable map, which reflects or illustrates the position of the influencedependence chart into four sectors (quadrant) (Figure 4).

Based on the results of data processing from questionnaires and Focus Group Discussions (FGDs), key variables that influence the sustainability of the Food Estate program in Central Kalimantan have been identified and defined. Each of these variables was then qualified and quantified based on the intensity of their influence, allowing the relationships between variables to be analyzed more comprehensively. This process resulted in the Matrix of Direct Influence (MDI), which maps the direct relationships between the variables and helps identify which variables have a dominant role in the system.

Using the MICMAC method, the MDI results are visualized into an influence map (Matrix of Data Influence) that is easier to interpret. This map shows the intensity of influence and dependency between variables in the form of an influence-dependence chart. In this map, each variable is placed according to the level of influence it has on other variables (influence) and the level of dependence on other variables in the system. Based on the grouping, the variables are divided into four sectors or quadrants (see Figure 4), namely:

1. Determinant Variables: These are variables with high influence but low dependency. They play a crucial role in determining the system's success, as they significantly impact other variables while being minimally influenced in return.
2. Key Variables: These variables have both high influence and high dependency. They are central to the system and act as primary determinants of the program's success, though their effectiveness heavily relies on other factors.
3. Result Variables: These are variables with low influence but high dependency. They are primarily shaped by other variables in the system and reflect the outcomes or impacts of changes in those variables.
4. Autonomous Variables: These variables have low influence and low dependency. They function as supporting elements with minimal involvement in determining the program's overall sustainability.

With this mapping, the influence-dependence chart facilitates the identification of strategic variables that need to be managed effectively to improve the success of the Food Estate program. For example, variables in the Determinant Variables quadrant need to be prioritized in management, as they have a major influence on the overall system without being overly dependent on other variables. In contrast, variables in the Result Variables quadrant show the end result of the interaction of other variables and can be used as indicators of the success of the program implementation. Through this mapping, the government and stakeholders can better understand the complex dynamics between variables in the Food Estate program.

Table 2. Tabulation of the Relationship between Influence and Dependence

	Var 1	Var 2	Var 3 . . .	Var n	Influence (Y-Axis)
Var 1	0	(V1,2)	(V1,3) . . .	(V1,n)	$\sum_{j=1}^{n}(Var_i, j)$
Var 2	(V2,1)	0			
Var 3	.				
.	.				.
.	.				
Var n	(Vn,1)			0	
Dependence (X-Axis)	$\sum_{i=1}^{n}(Var_i,1)$ ..			...	

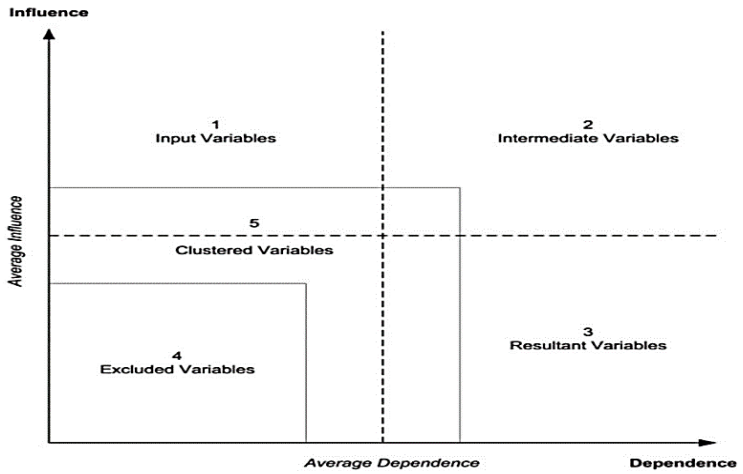

Figure 1. Illustration of MICMAC Analysis (Godet, 1994; Chatziioannou and Alvarez-Icaza, 2017)

	1 : Inst	2 : Infr	3 : Econ	4 : GovPol	5 : Cap	6 : AgTech	7 : Educ	8 : Exp	9 : Train	10 : MktAcc	11 : ProdPrice	12 : Distrib	13 : Mktng	14 : LandQlty	15 : Water	16 : Climate	17 : WasteMngmt	18 : Income	19 : LocIndDev	20 : FinSus	21 : ComInv	22 : DivJobs	23 : PedAccess
1 : Inst	0	2	1	2	2	2	1	3	3	2	3	1	0	P	3	3	0	3	1	1	0	0	1
2 : Infr	2	0	2	3	2	1	0	P	3	1	3	2	0	P	2	3	1	3	1	1	1	0	0
3 : Econ	3	3	0	3	3	2	2	2	2	2	2	1	2	2	2	2	0	3	2	1	1	1	1
4 : GovPol	3	3	3	0	3	3	3	3	3	3	3	3	3	2	2	P	2	2	1	2	2	1	2
5 : Cap	1	3	3	2	0	3	1	P	1	2	1	2	3	P	2	0	1	P	P	P	P	P	P
6 : AgTech	1	2	P	1	P	0	0	1	2	1	P	P	2	0	0	0	0	0	0	p	0	0	0
7 : Educ	P	P	3	P	P	P	0	2	3	P	P	P	2	P	P	0	2	P	P	P	0	P	3
8 : Exp	0	1	3	0	1	2	P	0	2	0	1	0	0	2	2	0	1	3	0	0	0	0	0
9 : Train	0	0	3	1	1	2	0	3	0	0	1	0	0	1	1	0	1	3	1	0	P	P	0
10 : MktAcc	2	0	2	2	2	1	P	0	0	0	2	2	1	0	0	0	0	P	2	P	0	0	1
11 : ProdPrice	P	2	3	P	P	P	P	P	P	P	0	1	1	P	P	0	1	3	P	P	0	1	1
12 : Distrib	0	0	P	0	P	0	0	0	0	P	P	0	P	0	0	0	0	P	P	P	0	2	0
13 : Mktng	0	0	P	0	P	2	0	0	0	0	P	P	0	0	0	0	P	P	0	0	0	P	0
14 : LandQlty	0	0	P	P	0	0	0	P	P	0	P	0	0	0	P	0	0	P	0	0	0	0	0
15 : Water	0	0	P	P	0	0	0	0	0	0	P	0	0	P	0	0	0	P	0	0	0	0	0
16 : Climate	0	2	3	P	0	1	0	1	1	2	P	P	0	P	P	0	0	P	0	0	0	0	0
17 : WasteMngmt	2	1	1	1	0	3	0	0	1	0	1	0	0	3	3	0	0	P	0	0	1	0	0
18 : Income	P	P	P	P	P	P	2	1	0	1	3	0	0	2	2	0	0	0	3	3	3	3	3
19 : LocIndDev	0	0	3	P	P	P	P	0	0	0	0	1	1	0	0	0	2	1	0	0	1	0	0
20 : FinSus	0	0	1	0	1	0	0	0	P	0	0	0	0	0	0	0	0	1	0	0	0	2	0
21 : ComInv	0	1	1	1	0	2	0	0	0	1	1	2	0	0	0	0	0	0	0	0	0	0	0
22 : DivJobs	0	0	0	0	0	0	3	0	0	0	P	0	1	0	0	0	1	0	0	2	0	0	3
23 : PedAccess	1	0	2	0	1	2	P	P	P	P	P	0	P	P	P	0	P	P	0	P	P	P	0

Figure 2. Matrix of Direct Influence

Influences range from 0 to 3 with the possibility to identify potential influences:
0: No influences
1: Weak
2: Moderete influence
3: Strong influence
P: Potential influence

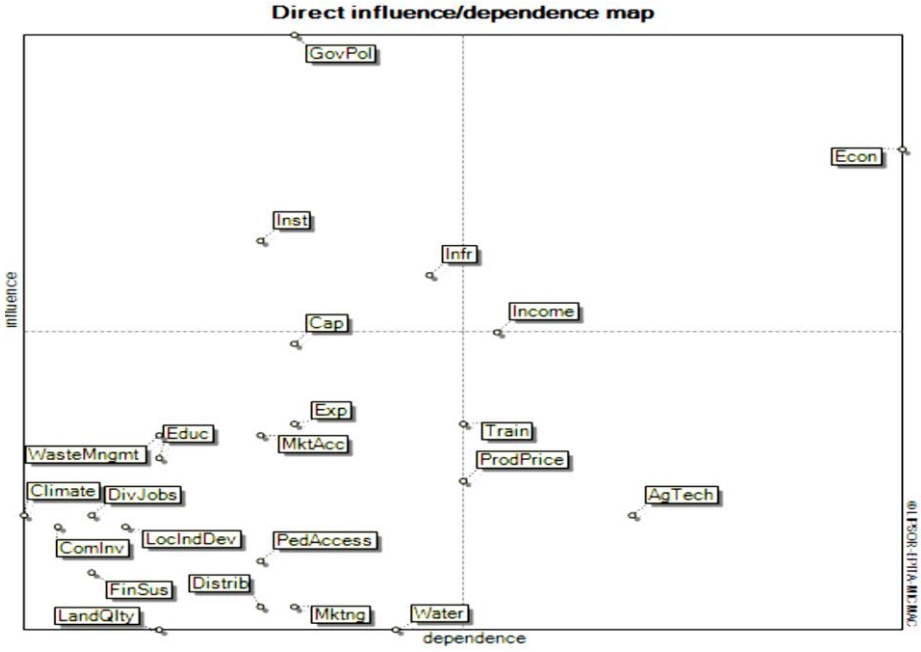

Figure 3. Position of a system variable in the direct influence-dependence map

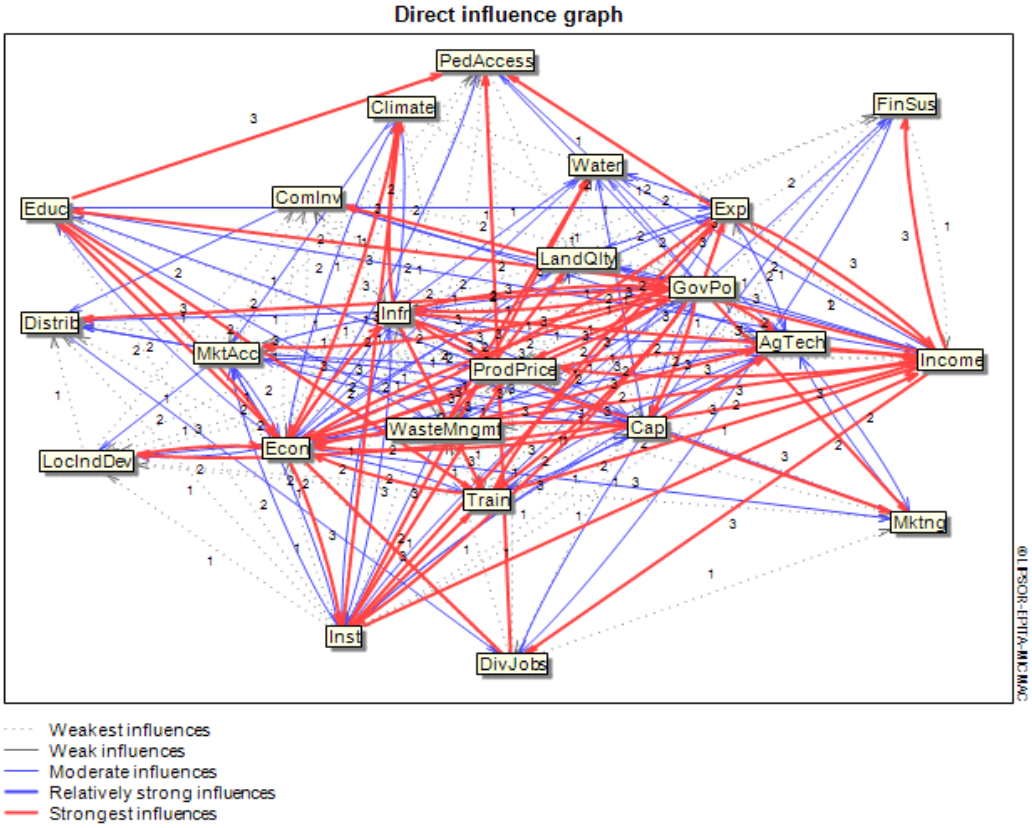

Figure 4. Graphic illustration of influence- dependence variables

Based on the results of the MICMAC analysis, the variables in the first quadrant (determinant variables) are government policy (GovPol), institutions (Inst), and infrastructure (Infr). The characteristics of the first quadrant are variables that have a high level of influence and low dependence. Then variables with high influence with high dependency, but unstable relationships between variables in the second quadrant (key variables) are the local economy (Econ) and farmer income (In-come).

Furthermore, variables in quadrant three (result variables) are variables that have low influence and high dependence on agricultural technology (AgTech), farmer training guidance (Train), and product prices (ProdPrice). These variables reflect the outcomes of changes driven by determinant or key variables in the system. For instance, improvements in agricultural technology or effective training programs directly influence product prices and farmers' productivity, highlighting their dependency on upstream factors. As a result, addressing these dependencies is crucial to enhancing the overall impact of the program.

Quadrant four (autonomous variables) includes business capital (Cap), education level (Educ), farmer experience (Exp), market access (MktAcc), distribution (Distrib), marketing of production (Mktng), land quality (LandQlty), water availability (Water), climate conditions (Climate), waste management (WasteMngmt), local industry development (LocIndDev), financial sustainability (FinSus), community involvement (ComInv), job diversity (DivJobs), and access to education (PedAccess). These variables have minimal influence and dependency, functioning more as background factors or supportive elements within the system. While they do not directly drive or respond to major changes, they provide essential conditions that can either facilitate or hinder the effectiveness of determinant and key variables, especially in long-term program sustainability.

Variables in quadrant four have low influence and dependence. Based on this figure, the relationship expressed by the green line means Weak influences, the blue line means Moderate influences, the dark blue line means Relatively strong influences and the red line means Strongest influences. Illustration of the MICMAC graph of 23 variables marked by the direction of the arrow indicates the effect of dependence.

The direction of the arrow from a variable shows the influence of that variable on other variables. Conversely, an arrow to a variable indicates that the variable is influenced by (dependent on) other variables. The more arrows and thick red lines from a variable means that the variable has a large influence on many other variables. Likewise, more arrows and thick red lines to a variable means that the variable has a high level of dependency from many other variables.

Based on the figure, some variables such as government policies, infrastructure, institutions, business capital, and product prices have a strong influence on other variables, indicated by the thick red lines and arrows going outwards from these variables. In contrast, variables such as farmer income, local economy, and access to education are strongly influenced by other variables, indicated by the many arrows pointing towards them. This indicates a high degree of dependency of these variables on other variables.

Matrix of Indirect Influence

Apart from being based on MDI, the position of variables in the influence-dependence chart quadrant is also based on MII (Matrix of indirect Influence) so that changes in their position can be seen through the displacement map. Based on the MII, each system variable is reclassified into four sectors (quadrants) based on its position on the influence-dependence chart, as presented in Figure 5. However, for some variables there is no change in position, except that the infrastructure variable has a displacement position towards quadrant 2. This shows that infrastructure becomes more influential and depends on other variables indirectly. On the other hand, almost all variables do not change their position due to indirect influence.

A visual representation of the complexity of interactions between system variables related to their degree of indirect influence and dependence on other variables is shown in Figure 6. It can be seen that the government policy variables and the local economy are indirectly influenced and dependent. The number on each arrow indicates the degree or rating of influence obtained through iteration of the Boolean matrix. In contrast to direct influence, most variables have a very strong dependent influence on other variables (marked by many red lines).

The variables are re-ranked based on their influence on other variables, thus showing the change in variable ranking from MDI to MII. After Boolean iteration, some variables have changed their order, either up or down.

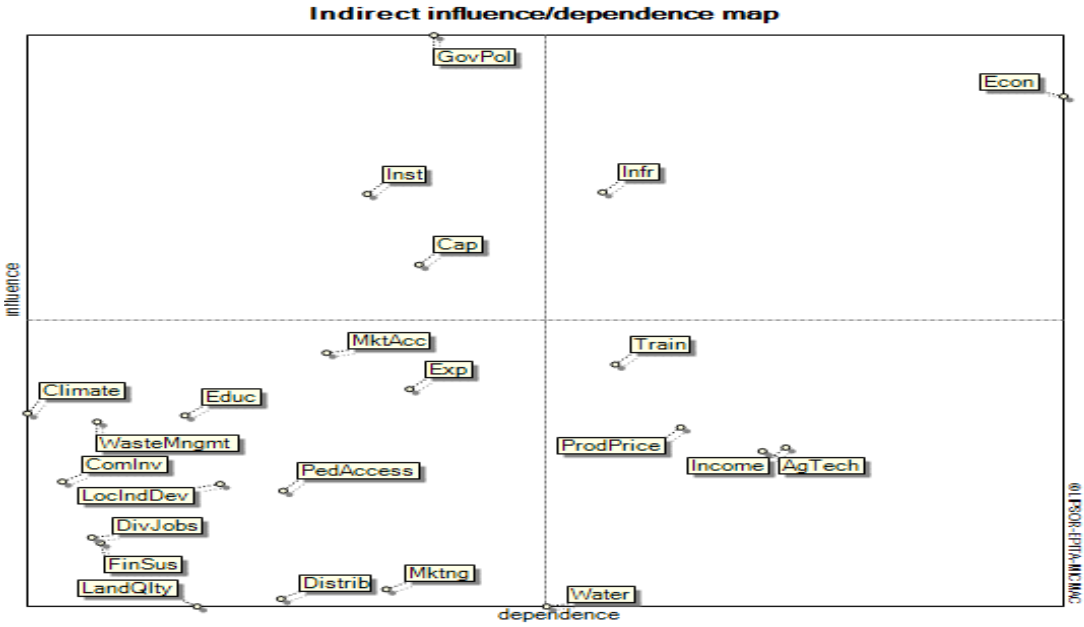

Figure 5. Position of a system variable indirect influence

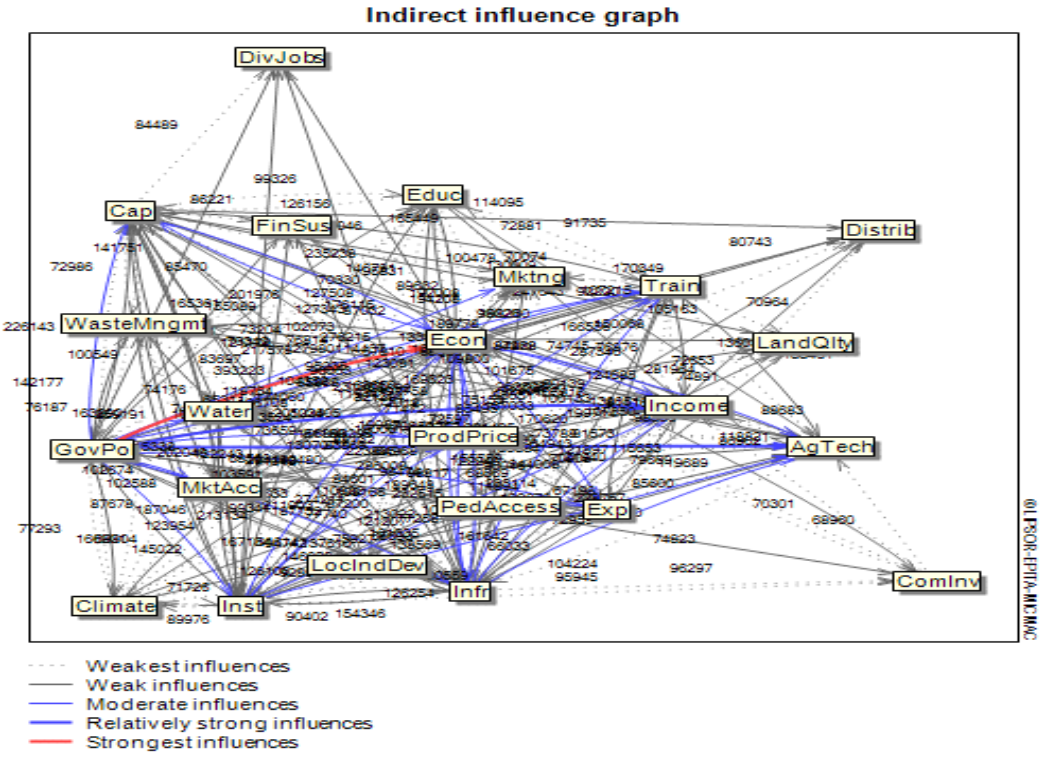

Figure 6. Interaction of indirect influence between variables

Based on the level of influence and dependency, the variables are re-ranked as shown in Figure 7. The red line indicates a decrease in variable rank, while the green line indicates an increase in rank that occurs due to indirect influence between variables. The five variables with the highest influence are government policy, local economy, infrastructure, institutions, and business capital. Meanwhile,

the variables with the highest dependency are local economy, farmer income, agricultural technology, product prices, and farmer coaching and training.

Indirectly, government policy and local economy variables influence and depend on each other. Each arrow indicates the degree of influence obtained through iteration of the Boolean matrix. Unlike the direct effect, most of the variables in the indirect effect have a strong dependency on other variables, which is indicated by the number of red lines.

Furthermore, through the change from MDI to MII, the relationship is obtained as shown in Figure 7. variables are re-ranked based on their influence on other variables, so that the change in the order of a variable from MDI to MII can be seen. Some system variables experienced a change in order from MDI to MII after Boolean iteration, either an increase or decrease in order. Based on the level of influence and dependence, the variables are re-ordered as presented in Figure 7. The red line indicates a decrease in variable rank and the green line indicates an increase in variable rank. An increase or decrease in rank occurs when there is an indirect influence between variables.

The five variables with the highest influence are government policy, local economy, infrastructure, institutions, and business capital, while the five variables with the highest dependency are local economy, farmer income, agricultural technology, product prices, and farmer coaching and training. The change in position of each variable from MDI to MII can be seen in the displacement map in Figure 8, which shows variables that have increased, decreased, or remained fixed in the long term. The change in position of each variable on the displacement map from MDI to MII where. Most of the displacement occurred only within the quadrants.

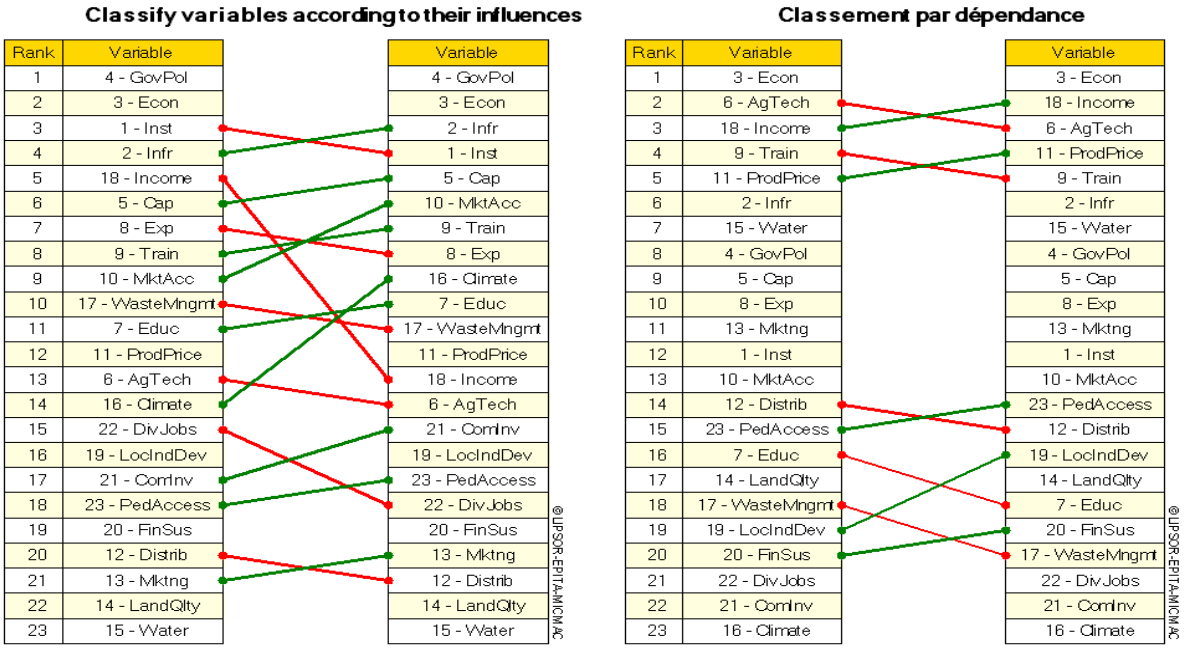

Figure 7. Changes in the ranking of variables from MDI to MII based on the level of influence

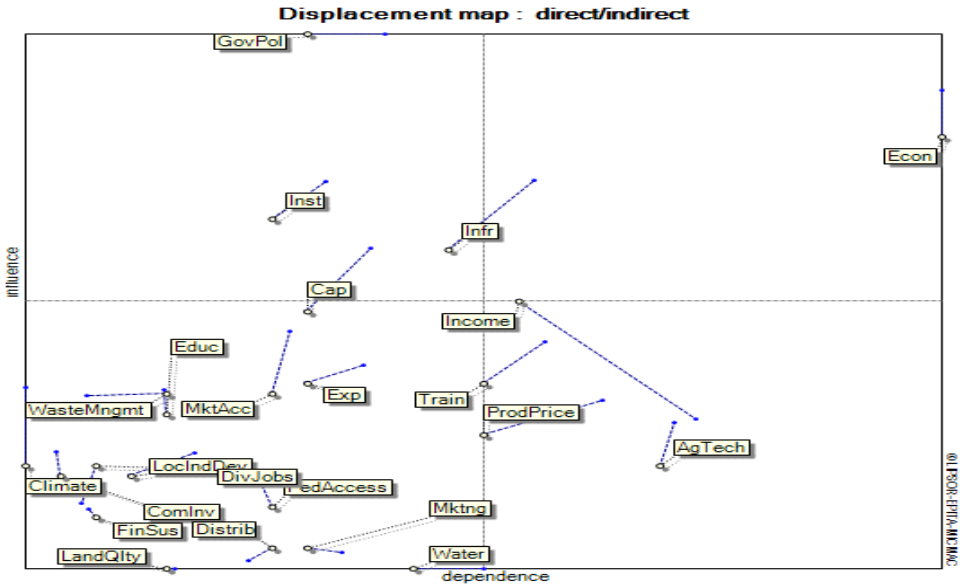

Figure 8. Position of a system variable in the direct influence/ dependence map

The findings of this study reveal that government policy, local economy and infrastructure are important variables affecting the sustainability of the Food Estate program. The research team in the field found that there were two integrated outputs in the three keys above, namely the provision of good road access (infrastructure) and the availability of agricultural extension groups (government policy). This condition is better than a decade ago, but it is not yet a strong foundation for entering large national markets or even exports. Another key factor is that stakeholders should highlight key outputs to boost the local economy such as the use of hybrid and local seeds and the existence of cooperatives for members. For decision-makers, this highlights the importance of continuous policy improvement, especially in addressing challenges such as peatland management and infrastructure gaps, which limit agricultural productivity and market access. In line with previous research, this study uniquely emphasizes the interdependence of variables such as the local economy and agricultural technology, which provides a nuanced understanding of systemic dynamics using the MICMAC methodology. This approach contributes to the literature by systematically mapping the direct and indirect influences among key variables, allowing stakeholders to prioritize interventions.

Key recommendations include developing adaptive policies, enhancing critical infrastructure through public-private partnerships, improving market access, promoting local economic activities, and providing training for farmers on sustainable practices. Collaboration among government agencies, local communities, and private sectors is essential to ensure coordinated efforts. Limitations include the focus on Kapuas and Pulang Pisau districts, which may limit generalizability. Future studies should explore other regions, consider broader variables like climate change, and adopt longitudinal designs to capture temporal dynamics. Combining MICMAC with tools like system dynamics modeling could provide deeper insights and optimal strategies for enhancing Food Estate program sustainability in Indonesia and beyond.

CONCLUSION

Based on the MICMAC analysis that has been carried out to determine the key factors for the sustainability of the livelihoods of salt farmers, the results show that the key variables that are a major influence (influence) or variables that strongly influence other variables based on the Matrix of Direct Influences (MDI) and Matrix of Indirect Influences (MII) are government policies, local economy, and infrastructure. Meanwhile, variables that have a high level of dependence based on others based on the Matrix of Direct Influences (MDI) and Matrix of Indirect Influences (MII) are government policies, local economy, and infrastructure. While variables that have a high level of dependence based on MDI

and MII are local economy variables, agricultural technology. On MDI and MII are variables of local economy, agricultural technology.

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