POVERTY OR ECONOMIC STAGNATION? ASSESSING THE DUAL ROLE OF SOCIAL ASISSTANCES IN JAVA

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Abstract. *This study aims to identify the factors that affect the structural transformation of individuals on the island of Java, including the role of education, technology, access to credit, and the condition of basic needs. This study also analyses the influence of structural transformation on the risk of poverty and extreme poverty. It evaluates the extent to which government social protection programs can encourage structural transformation while reducing poverty. The novelty of the research lies in the use of a simultaneous approach of two micro-outcomes, the transformation of the employment sector and the risk of extreme poverty, to test whether social assistance only acts as a consumption protection or can also be a catalyst for more inclusive, productive, and sustainable village development. The analysis was carried out by multinomial logistic regression using SUSENAS 2022 data, with an analysis unit of 352,646 individuals on the island of Java. Dependent variables include structural transformation and extreme poverty levels, while independent variables include conditions of meeting basic needs and government programs. The results of the study show that individual structural transformations on the island of Java still face complex dynamics; Significant internet use is driving a shift to the non-agricultural sector, while savings, education, telephone, and cooperative credit tend to retain individuals in the agricultural sector. Structural transformation has not been significant enough to reduce the risk of extreme poverty. However, it can reduce the probability of individuals being in the poor category, thus requiring a risk mitigation strategy that is integrated with strengthening the productive economy. Therefore, social protection programs need to be designed more progressively, focusing on improving digital skills, financial literacy, entrepreneurship, and graduation mechanisms in order to function as a catalyst for individual economic mobility towards a more productive and sustainable sector.*

Keywords: *Java; Poverty; Social Assistance; Structural Transformation*

1. INTRODUCTION

Poverty is one of the problems of economic development in every developing country. Case studies in several developing countries in the Asian and African regions show that the majority of people still depend on unproductive sectors. In general, individuals living in rural areas tend to depend on the agricultural sector, which tends to be vulnerable to climate change. According to FAO (2017), a strategy to overcome poverty is through rural development. In line with the context of regional development, land is a production factor that plays an important role in the economic differentiation of a region (Bromley, 1989; Liu et al., 2014). Land can affect the activities of each individual in economic activities (Rigg, 2006; Markovchick-Nicholls et al., 2008; Siciliano, 2012; Guo et al., 2018). For example, individuals who live on fertile land tend to be more productive when compared to those living on limited land.

The dynamics of structural transformation in economic development are expected to ensure that every individual no longer depends on the economic sector as the primary sector, but experiences development towards the secondary sector and the tertiary sector. Lewis (1954) in his classical model explained that economic development occurs through the transfer of labour and sources of income from the traditional low-productivity

sector, such as agriculture, to the more productive modern sector, namely industry and services. This process is expected to increase per capita income, expand employment opportunities, reduce inequality, and strengthen household resilience from economic risks. In a broader welfare perspective, Sen (1999) emphasized that development is not only in the form of increasing income, but also increasing capabilities for welfare.

In the long term, structural transformation is expected to overcome fundamental development problems such as poverty. However, in reality, the dynamics of structural transformation in developing countries show mixed progress. According to Collier and Dercon (2014), poverty reduction can be achieved through urbanization, migration out of agriculture, industrialization, and transformation of agriculture into more automated, large-scale businesses. Christiaensen and Martin (2018) also underscore the importance of industrialization and restructuring of the agricultural sector to accelerate poverty reduction. This condition is different in countries where the largest contribution comes from the agricultural sector. Growth in the agricultural sector has consistently been found to be two to three times more effective in reducing poverty than equivalent growth in the non-agricultural sector. In the context of rural development, land assetization is one of the strategies that are widely adopted (Clark et al., 1993; Huang & Wang, 2008; Chen, 2013). Case studies in China show that land assetization modernizes agriculture, increases farmers' incomes, improves rural social security, and narrows the rural-urban gap (Li, 2007; Liu et al., 2008; Wu et al., 2018; Zhou et al., 2019a; Chen & Long, 2019). Through land system reform since 1978, China's poor population has declined drastically so that by 2020 the country managed to achieve the poverty eradication target ten years ahead of the SDGs target (Zhu & Chen, 2016; Liu & Li, 2017; Zhou et al., 2018).

The problem of poverty and the complexity of structural transformation dynamics also occur in Indonesia, especially on the island of Java. The island of Java tends to be the economic centre nationally, but each province still faces the problem of poverty. Based on Figure 1, regarding the data on the percentage of the poor population, it can be seen that there are still provinces with a higher percentage when compared to national poverty, namely Yogyakarta, Central Java, and East Java. Furthermore, the percentage of poor people in each province has not shown a significant decrease.

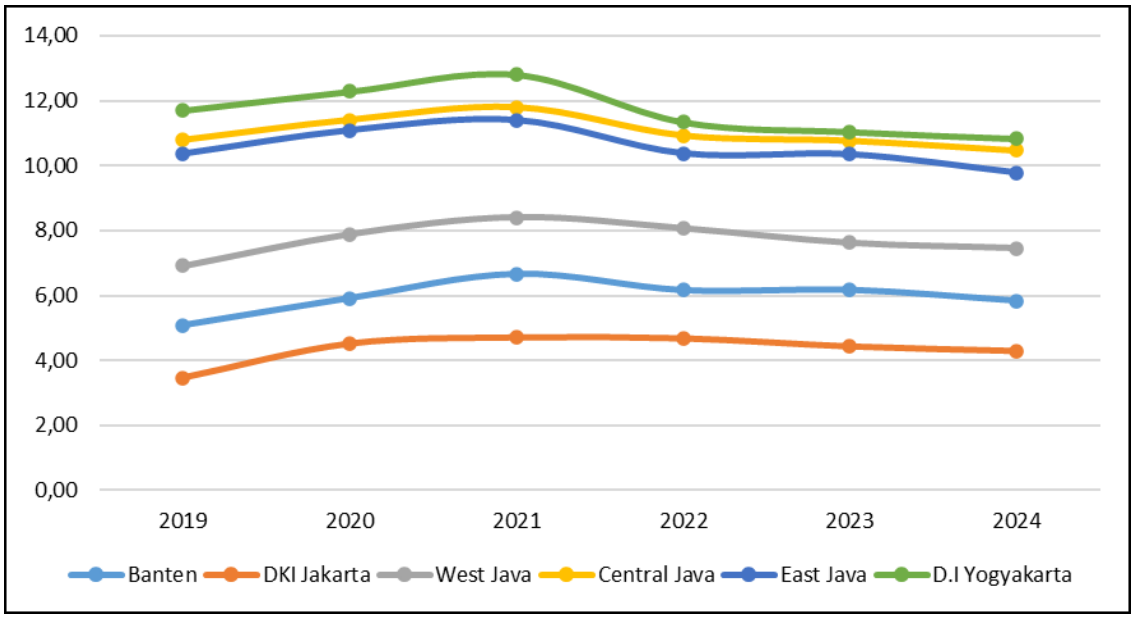
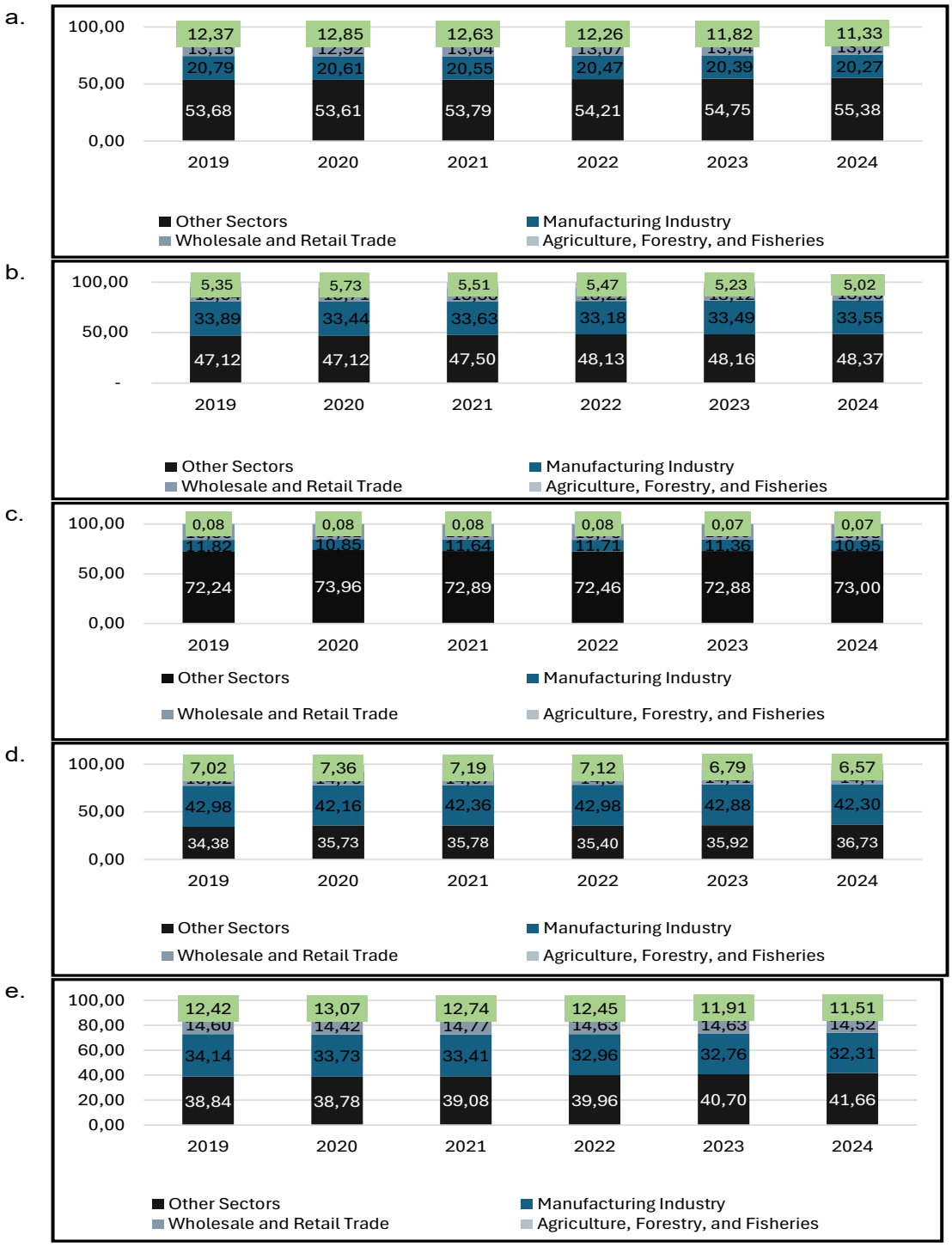


Figure 1. Percentage of Poor Population by Province in Java Island and Indonesia (Source: BPS-Statistic Indonesia, 2025)

One of the problems of poverty in every province on the island of Java is that the majority of people still rely on sectors with low productivity, such as the primary sector.

This condition generally occurs in rural communities with limited access to education, skills, digital technology, and finance (Liu-Farrer et al., 2021; Cimino et al., 2024). The main problem in this primary sector is the risk of crisis because it depends on the uncertainty of natural resources. Dadhich (2019) highlights that the agricultural crisis is triggered by an imbalance between capital and income as well as high natural risks. Krishna and Meenakshi (2022) and Jayne et al. (2021) emphasize the importance of entrepreneurial and infrastructure development, while Ferrari et al. (2022) and Synowiec (2021) underscore the role of digital technology.



Note: a. Indonesia; b. Banten; c. Jakarta; d. West Java; e. Central Java; f. East Java; g. Yogyakarta

Figure 2. Sectoral Contribution by Province in Java Island
(Source: BPS-Statistic Indonesia, 2025)

Furthermore, every province on the island of Java has undergone structural transformation, but still faces several challenges. Based on Figure 2, the contribution of the sector of each province on the island of Java tends to be dominated by the processing industry. It indicates that most of the community has moved from the primary sector to the secondary sector to the tertiary sector. Based on the challenges of Java Island in structural transformation in the context of economic development, the Indonesian government formulated a strategy through the implementation of fiscal decentralization. Each local government has the authority to plan programs and activities and budget according to its own needs, especially priority programs for poverty alleviation and extreme poverty. The government can focus on productive spending, such as in the fields of education, health, and others (Finuliyah, Susilo, and Saputra, 2023; Khusaini et al., 2022) However, until now, there are still questions about the effectiveness of various government programs, especially those related to social protection. Therefore, a strategy is still needed to overcome poverty, not only by providing social assistance, but also by encouraging structural transformation.

This research aims to identify the factors that affect structural transformation, including the role of education, technology, access to credit, and the conditions of basic needs. Furthermore, this study also analyzes the influence of structural transformation on the risk of poverty and extreme poverty. It assesses the extent to which government social protection programs can affect structural transformation while reducing poverty. The novelty of this research lies in the simultaneous approach of two micro-outcomes, namely the transformation of the employment sector and the risk of extreme poverty, as well as examining whether social assistance only functions as consumption protection or can be a catalyst for structural transformation towards more inclusive, productive, and sustainable village development.

2. LITERATURE REVIEW

The problem of poverty is the responsibility of every party in a country, including Indonesia. The implementation of fiscal decentralization for more than two decades, encouraging poverty alleviation and other development problems is not only the responsibility of the central and regional governments, but also related stakeholders, including the role of the community. Article 34, paragraph 1 of the 1945 Constitution of the Republic of Indonesia mandates the obligation for the state to take care of the poor and abandoned children; furthermore, Presidential Regulation Number 166 of 2014 concerning the Poverty Alleviation Acceleration Program. The existence of regulations related to poverty alleviation shows that this problem remains a task that the local government must address.

In analysis related to the problem of poverty, it is often associated with the use of paradigms, namely the neo-liberal paradigm and social democracy. According to Syahyuti in Widiastuti (2021), there is a difference between the two paradigms; in the neo-liberal paradigm, the main focus is on the market mechanism and the role of each individual in it. Meanwhile, the social democracy paradigm tends to lead to the problem of poverty being seen as a structural problem. Poverty occurs due to inequality in society in obtaining services, such as education and health. Therefore, the choice of a paradigm approach allows for differences in formulating solutions to overcome poverty, including extreme poverty. Furthermore, the alleviation of extreme poverty can also be done by encouraging rural households to experience a structural transformation of the economy towards a more productive sector.

The dynamics of rural structural transformation indicate a change in the main sector to support economic growth. The literature review aims to understand the development of knowledge related to the dynamics of structural transformation in rural areas and their impact on community welfare. Structural transformation that occurs in rural areas has an impact on sustainable development. Conceptually, sustainable development requires society to find new approaches in the economy, both in terms of production and consumption, so that it will form a new level of efficiency to produce more output with

fewer resources and waste (Eisenmenger et al., 2020; Schroder et al., 2020). In order to achieve a sustainable development economy and an equitable distribution of urban-rural development results, it is necessary to explore policy transmission that combines the concept of urbanization to rural development (Qing Ma et. al. 2023). In contrast to the dual economy theory put forward by W. Arthur Lewis, which explains the process of economic development in a classical framework, it assumes that the supply of labour is unlimited in facilitating economic development (Lewis, 1954).

Lewis's theoretical model analyzes the process of economic growth in less developed countries not from a neoclassical economic perspective, but from a development economics perspective (Loewenstein, 2017). In line with previous research conducted by Wang et al. (2020), it is stated that the relationship between trade dynamics and the economic achievements of sustainable development also encourages the achievement of structural transformation marked by the transition from the natural resources sector to the trade sector. Rural transformation includes changes in agricultural techniques, shifts in rural land functions, population displacement, and collaboration dynamics between primary sectors and other sectors (Dong et. al. 2023). Huang & Shi (2021) also stated that rural transformation involves a combination of agricultural transformation plus non-agricultural employment growth in rural labour. According to Bernstein (2016), globalization has a significant impact on the restructuring of agriculture, the landscape environment, and agricultural methods. Rural residents will not depend on the agricultural sector, so they will begin to diversify economic activities. In research conducted by Huang (2020), it shows that there are four stages of rural transformation, including (i) agricultural production relies on staple foods; (ii) the diversification and commercialization of agriculture began to emerge; (iii) agricultural specialization increases and non-agricultural employment also increases, thus encouraging urbanization and mechanization of agriculture; to (iv) rural transformation will result in high-value, sustainable, and integrated agriculture in urban rural development.

When structural transformation succeeds in uniting the agricultural sector and the non-agricultural sector, it affects the integration of the labour market and the capital market. As a result, the labour productivity gap between the two sectors will shrink to close to zero. In the end, the income or wage levels of both sectors are high when compared to those of the former. The characteristics of people in the agricultural, industrial and service sectors have differences in terms of education, skills, economic conditions and social structure (Liu-Farrer et al., 2021). The majority of people from the agricultural sector tend to have a lower level of education and skills than people in the service and industrial sectors. In line with this statement, Botri (2013) in his research explained that farmers living in the Western Balkans and EU countries have a lower level of skills and education than those in other sectors. Therefore, workers or communities in the agricultural sector tend to have lower productivity because, in the focus of labour-intensive economic development, the absorbed labour has lower skills than the industrial and service sectors (Oyelaran-Oyeyinka et. al. 2016).

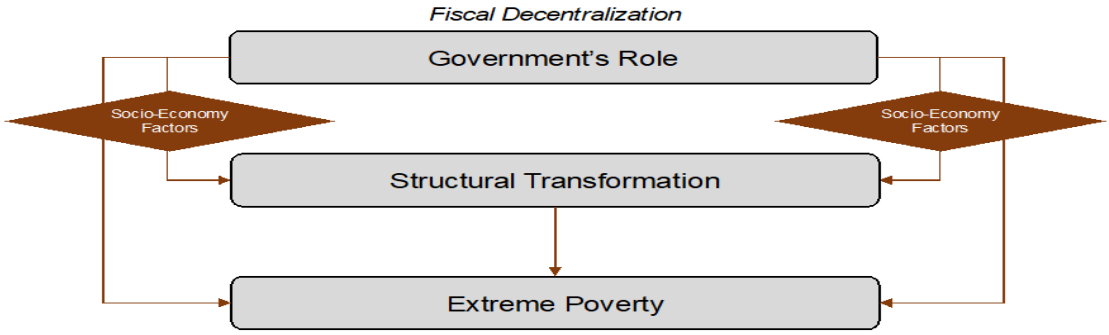


Figure 3. Conceptual Framework
(Source: Author, 2025)

There is a difference in the implementation of technology in people who work in the agricultural sector and the non-agricultural sector. Based on social structure, people in the agricultural sector tend to be more easily influenced by social factors, such as the trust of social networks in making decisions to apply digital technology. The use of social interaction between farmer groups can be an effective strategy in promoting the application of digital technology for the transfer of the conventional agricultural sector to an industrial-based agricultural sector. (Cimino et. al. 2024). Meanwhile, people in the industrial sector are synonymous with rapid technological developments, so that the workforce produced has high skills and labour productivity (Rotatori et al., 2021). In general, people in the service sector do not have significant differences from people in the industrial sector in terms of education. However, the specific skills they possess usually lead to finance, health, and technology development. In line with the findings of Nwani et. al. (2020), the growth of the service sector in Nigeria is supported by the innovation and skills of its workforce in the fields of finance and telecommunications. Therefore, the workforce from the service sector is more resistant to economic uncertainty shocks because they tend to be adaptive to change. Further, the conceptual framework can be seen in Figure 3.

3. RESEARCH METHODS

The analysis technique used was multinomial logistic regression. The use of this method is based on the research objectives that have been determined, using SUSENAS 2022 data. The unit of analysis used was individuals in Java, as many as 352,646 individuals. The variables used in this study include two dependent variables, namely (i) variables related to structural transformation and (ii) extreme poverty level variables. In addition, there are independent variables used in this study, covering (i) conditions of meeting basic needs, and (ii) government programs. Furthermore, the following is an elaboration of the independent variables used in this study.

Table 1. Description of Independent Variables

Variable Classification	Variable	Description
Dependent Variables	Structural Transformation	0: Primary Sector (Agriculture) 1: Secondary Sector (Manufacturing) 2: Tertiary Sector (Services)
	Extreme Poverty Level	0: Not Poor 1: Poor 2: Extremely Poor
Fulfillment of Basic Needs	Ownership of Savings	0: No 1: Yes
	Internet Use	0: No 1: Yes
	Phone Use	0: No 1: Yes
	Education	Years of Schooling
	Access to Commercial Bank	0: No 1: Yes
	Access to Rural Bank	0: No 1: Yes
	Access to Cooperative	0: No 1: Yes
	Home Ownership	0: No 1: Yes
	Access to Proper Sanitation	0: No 1: Yes
	Access to Clean Water	0: No 1: Yes
Government Assistance (Social Assisstance)	Kartu Keluarga Sejahtera	0: No 1: Yes
	Program Keluarga Harapan	
	Bantuan Pangan	
	Bantuan Rutin	

(Source: Author, 2025)

The analysis was carried out in stages according to the purpose of the study. First, an analysis is carried out to determine the factors that affect structural transformation. Second, an analysis was carried out to determine the effect of structural transformation on reducing poverty rates and extreme poverty. Third, the analysis was carried out to determine the role of the government in encouraging structural transformation and reducing extreme poverty.

4. RESULTS AND DISCUSSION

Based on the purpose of the study to identify the factors that affect structural transformation, the results of the multinomial logistic regression estimation can be found to be different between the primary sector and the secondary sector (Table 2). The results of the multinomial logistic regression estimate show that, compared to the tertiary sector, the probability of individuals in Java to survive in the primary sector (agriculture) is significantly influenced by several factors. The variables of savings ownership, education level, and telephone use have a positive and significant effect on the likelihood of individuals staying in the primary sector. Many individuals with access to financial literacy, relatively better human capital, and communication connectivity are still surviving in the agricultural sector. However, internet use shows a significant negative influence on the chances of being in the primary sector, showing that internet adoption is related to the tendency to move from the agricultural sector to a more modern sector. The access factor of formal financial institutions (Commercial Banks) is also significantly negative. At the same time, cooperative credit is positively strong, showing the important role of micro institutions in supporting the agricultural sector. Interestingly, home ownership did not have a significant effect on the primary sector. In contrast, drought status had a positive effect, indicating that household adaptation remained in the agricultural sector despite facing natural risks.

These results generally reflect that households with social capital and connectivity (via telephone) tend to stick to agricultural activities because they are more tied to their local networks, land, and community assets (Addai et al., 2024; Fang et al., 2024). Internet adoption appears to be a "pull-out" factor from the primary sector, which could mean that the use of digital technology gives exposure to non-agricultural opportunities (Sun & Li, 2025). Meanwhile, the positive findings of cooperative credit confirm that microfinance instruments still dominate working capital support in the traditional agricultural sector. The findings on drought status also show how climate vulnerability does not always directly trigger sector shifts. However, households instead adapt to survive in agriculture, indicating the need for policy interventions based on risk mitigation and agricultural innovation.

In the results of the estimation of the secondary sector (industry) with the outcome base of the tertiary sector (services), there is a different pattern. The variables of savings ownership, education level, telephone use, access to KUR, Commercial Banks, BPR banks (rural bank), and cooperative loans have a significant positive influence on the probability of households working in the secondary sector compared to the tertiary sector. Households with better financial literacy, access to financing, and communication connectivity tend to be pushed into the processing industry. On the other hand, internet use still shows a negative influence, indicating that it is likely that internet use encourages individuals to work in the tertiary sector. The factor of home ownership has a significant negative effect, indicating that households that have settled tend to be reluctant or have not been encouraged to move to the industrial sector. At the same time, the drought status variable is not significant in this sector.

This explanation shows that the transformation to the secondary sector requires synergy between financial capital, education, and access to formal and micro financing institutions, all of which increase the ability of households to enter the processing industry. However, negative findings on internet use suggest that digital technology in rural areas is more used for informal or social service activities, rather than to support industrial productivity. Negative homeownership findings also point to the possibility of a

preference for stability or fixed asset attachment, which hinders a shift to secondary sectors that often require higher labour mobility.

Furthermore, based on the objectives of the next research related to the analysis of the influence of structural transformation on the risk of poverty to extreme poverty, it can be seen in Table 3. The results of the logit multinomial estimation show that the probability that Java fall into the category of poverty and extreme poverty, compared to households that are not poor, is influenced by several important variables. The structural transformation variable did not have a significant effect, indicating that the shift in the work sector has not significantly impacted the likelihood of escaping poverty. Meanwhile, the ownership of savings and the use of the telephone have a significant negative effect on the opportunity to become poor. The same is true of the opportunity to enter poverty (not extreme). Meanwhile, variables such as the internet, access to credit, and drought conditions have a positive effect on poverty.

Table 2. Multinomial Logistic Regression Results Identifying Factors Influencing Structural Transformation

Variables	Coefficient	Std. err.	P>|z|	Coefficient	Std. err.	P>|z|
Primary				**Secondary**		
Ownership of Savings	0,6080693	0,0126526	0,000	0,8317092	0,0099179	0,000
Internet Use	-0,2102522	0,0188061	0,000	-0,3412648	0,0151872	0,000
Phone Use	0,8825942	0,0202347	0,000	0,8653673	0,0162098	0,000
Education	0,1200084	0,0014751	0,000	0,1740123	0,0012069	0,000
Access to KUR	-0,0010158	0,0187626	0,957	0,0896088	0,0146175	0,000
Access to Commercial Bank	-0,145724	0,0304067	0,000	0,0604692	0,0226482	0,008
Access to Rural Bank	-0,0055809	0,0485707	0,909	0,0953032	0,0376232	0,011
Access to Cooperative	0,3697368	0,0227275	0,000	0,1963641	0,0194064	0,000
Home Ownership	0,0173833	0,0176006	0,323	-0,3839953	0,0128546	0,000
Access to Proper Sanitation	-0,10287	0,0258087	0,000	0,0474341	0,0218075	0,030
Access to Clean Water	0,0915467	0,0338269	0.007	-0,0086837	0,0279354	0,756
cons	-3,294868	0,0311755	0,000	-2,86016	0,0253465	0,000
Number of obs	352,646					
LR chi2(17)	90970,48					
Prob>chi2	0,0000					
Pseudo R2	0,1513					

(Source: SUSENAS, 2022, Processed)

These results show that although various financial access is available, such as cooperative loans and BPR banks (rural bank), without adequate productive management, there is a risk of increasing the burden on households and increasing the probability of falling into extreme poverty. The negative influence of savings ownership underscores the importance of self-sufficient financial protection in containing economic shocks. The phenomenon that internet use increases the probability of extreme poverty can be interpreted as an indication of vulnerable households trying to access digital solutions but have not succeeded in converting them to real economic opportunities. Meanwhile, the significant drought status underscores the importance of more serious climate adaptation interventions to mitigate the extreme risk of poverty in vulnerable areas.

The problem of poverty and the dynamics of structural transformation raise questions related to the role of social protection. Based on Table 4, the estimated results show that social assistance programs have a varied influence on the probability of individuals in Java transforming from the primary sector to the secondary and tertiary sectors. For the probability of working in the secondary sector compared to the primary sector, the variables of Prosperous Family Card (KKS) and food assistance had a significant positive

effect, showing that recipients of assistance tend to have a greater opportunity to move to the processing industry sector. On the other hand, the receipt of the Family Hope Program (PKH) has a significant negative influence on the probability of entering the secondary sector, while routine assistance is not significant. PKH functions more as a consumption safety net that prevents households from immediately shifting to the industrial sector.

These findings show the complex dynamics of the functions of each program. KKS and food assistance provide basic economic support that gives households space to access opportunities in the secondary sector. However, PKH, as conditional education and health assistance, tends to keep households in a temporary status in order to continue to meet the requirements of the program, which can indirectly reduce their incentive to immediately move to industrial sectors that may demand mobility and longer working hours. Meanwhile, on the probability of households moving to the tertiary sector compared to staying in the primary sector, the influence of social assistance programs shows a different pattern. The coefficients of KKS, PKH, and food assistance have a significant negative effect. Meanwhile, only routine assistance has a significant positive effect on the probability of entering the service sector. These results show that most social assistance programs, especially PKH and food assistance, are associated with the tendency of households to remain in the primary sector and are not encouraged to transform to the service sector.

Table 3. Multinomial logistic regression results for analyzing the effect of structural transformation on the risk of poverty up to extreme poverty.

Variabel	Coefficient	Std. err.	P>|z|	Coefficient	Std. err.	P>|z|
Extreme Poverty				**Poverty**		
Structural Transformation	0,0217886	0,0397982	0,584	-0,0132509	0,0118972	0,265
Ownership of Savings	-0,178067	0,0713835	0,012	-0,1902905	0,0211965	0,000
Internet Use	0,1998704	0,086869	0,016	0,1847069	0,0247401	0,000
Phone Use	-0,2600878	0,886758	0,003	-0,228472	0,0264864	0,000
Education	-0,0078669	0,007373	0,286	-0,0035062	0,0021863	0,109
Access to KUR	0,1360353	0,090264	0,132	0,1634628	0,0266022	0,000
Access to Commercial Bank	0,1817555	0,1364418	0,183	0,2046996	0,0407126	0,000
Access to Rural Bank	0,7926952	0,1657557	0,000	0,0017427	0,0719511	0,981
Access to Cooperative	0,4807328	0,0996761	0,000	0,3737698	0,0313951	0,000
Home Ownership	0,0895879	0,0878417	0,308	0,2120991	0,0273129	0,000
Access to Proper Sanitation	0,224709	0,1324759	0,090	0,159981	0,038535	0,000
Access to Clean Water	0,7622136	0,1197953	0,000	0,0440612	0,0493971	0,372
cons	-5,926264	0,1601903	0,000	-3,433382	0,0475338	0,000
Number of obs	352,646					
LR chi2(17)	653,19					
Prob>chi2	0,0000					
Pseudo R2	0,0048					

(Source: SUSENAS, 2022, Processed)

An interpretation of these findings shows that although government social assistance

programs are designed to reduce consumption vulnerability, in the short term, programs such as PKH and food assistance have not sufficiently encouraged households to shift to the service sector. Conversely, the positive effects of routine assistance in the tertiary sector reflect the role of regular assistance in maintaining household liquidity so that they are freer to try informal service activities.

Table 4. Results of the Effect of Government Assistance on Structural Transformation in Java

Variabel	Coefficient	Std. err.	P>|z|
Secondary			
KKS	0,0994327	0,017473	0,000
PKH	-0,0582798	0,0170383	0,001
Food Assistance	0,035843	0,0157925	0,023
Regular Assistance	-0,0220238	0,0216391	0,309
cons	-1,835227	0,0067132	0,000
Tertiary			
KKS	-0,036487	0,0141269	0,010
PKH	-0,3211518	0,0140303	0,000
Food Assistance	-0,3198306	0,0125576	0,000
Regular Assistance	0,0661837	0,0168172	0,000
cons	-0,9212522	0,0047046	0,000
Number of obs	**352,646**		
LR chi2(17)	**653,19**		
Prob>chi2	**0,0000**		
Pseudo R2	**0.0050**		

(Source: SUSENAS, 2022, Processed)

Furthermore, Table 5 presents the results of the multinomial logit estimation of the effect of government assistance on individual poverty on the island of Java. Poverty outcomes (but not extremes) obtained different results. Structural transformation has a significant negative effect, indicating that the transfer of households to the non-agricultural sector helps reduce the probability of being in the poor category. On the other hand, all social assistance programs were recorded to have a significant positive influence on the probability of households entering the poor group. PKH has the highest influence, followed by food assistance, routine assistance, and community service.

These findings reflect the role of social protection programs that have been focusing on restraining household consumption on the brink of poverty. However, positive findings for PKH, KKS, and food assistance reveal a pattern indicating that poor households are more likely to receive assistance, or that this assistance is disproportionately found in groups that have not fully transitioned out of poverty. Thus, it is important for the design of social protection policies to not only focus on the consumption aspect but also to integrate strategies to strengthen productive economic capacity so that households can truly break free from the poverty line in the long term.

Meanwhile, the probability of individuals on the island of Java falling into the category of extreme poverty is significantly influenced by several social assistance programs. PKH programs and food assistance have a significant positive influence on the tendency to have a higher probability of being in extreme poverty conditions. Meanwhile, routine assistance has a significant negative effect, showing the role of regular social protection

in preventing households from falling into the most severe poverty levels. The transformation variable is not significant to the risk of extreme poverty.

This interpretation suggests that programs like PKH and food assistance are effectively targeting the very poor. However, they also reveal a high level of attachment, as extreme poverty households are the most recipients of these programs, and they still rely on basic consumption from these two sources without experiencing a meaningful income transition. The negative effects of routine assistance give a positive signal that the fixed transfer scheme helps to keep households in more stable conditions, thereby lowering extreme risks. These results emphasize the importance of graduation strategies so that households receiving PKH and food assistance not only survive as long-term recipients, but are pushed up and out of the poorest group.

Table 5. Results of the Effect of Government Assistance on Poverty Status

Variabel	Coefficient	Std. err.	P>|z|
Extreme			
Structural Transformation	-0,0117874	0.0352561	0,738
KKS	-0,100742	0,0817719	0.218
PKH	0.9125926	0,0769831	0,000
Food Assistance	0.265311	0,0768691	0,001
Regular Assistance	-0.2395004	0,1085314	0,027
cons	-5.883318	0,0682579	0,000
Poverty			
Structural Transformation	-0,0547284	0,0105606	0,000
KKS	0,060495	0,02565	0.018
PKH	0,4653999	0,0242517	0,000
Food Assistance	0,1335781	0,023674	0,000
Regular Assistance	0,0873782	0,030575	0.004
cons	-3,242848	0,0198355	0,000
Number of obs	**352,646**		
LR chi2(17)	**1166,00**		
Prob>chi2	**0,0000**		
Pseudo R2	**0.0086**		

(Source: SUSENAS, 2022, Processed)

Based on the results of this study, it can be seen that one of the important factors influencing the structural transformation of rural households on the island of Java is the increase in internet use, which has proven to be significant in driving the shift from the primary sector to the tertiary sector. In addition, social assistance programs such as the Prosperous Family Card (KKS) and food assistance also have a significant positive effect on the probability of individuals switching to the secondary sector. These findings indicate that recipients gain consumption stability that allows them to take up employment opportunities outside of traditional farming more freely. However, this pattern also shows that the contribution of social assistance programs is more dominant in maintaining consumption. However, its impetus to accelerate the shift to the industrial or productive services sector is not fully optimal.

Referring to these results, development policies on the island of Java need to be focused on digital skills improvement programs and financial literacy directly at the individual level, no longer just through a household approach. It can be realised through the implementation of information technology training that is integrated with industrial vocational programs, as well as providing incentives for the adoption of formal financial services such as personal savings and productive credit access, designed according to the individual's risk profile. Local governments can also take a strategic role in facilitating micro-entrepreneurship incubation as well as digital technology-based business mentoring that targets the productive age group, so that they have a higher adaptive capability to move to more prospective non-agricultural sectors. Thus, this policy strategy that is directed directly at strengthening individual capacity is expected to accelerate the structural transformation process while increasing the resilience of rural communities on the island of Java to the risk of poverty in the future.

On the other hand, the findings of this study also show that to reduce poverty and extreme poverty rates, a more targeted strategic approach is needed. Based on the results of the analysis, more effective poverty alleviation strategies include expanding individual access to information and communication technology, increasing digital literacy, and strengthening financial inclusion through savings ownership and utilization of banking services. Meanwhile, the government's social assistance program, which has been functioning as an important safety net, tends to be unable to solve the problem of poverty structurally. Therefore, it is necessary to redesign social assistance policies so that they are not only consumptive but also directed at strengthening the productive capacity of rural individuals, so that the process of structural transformation can go hand in hand with sustainable poverty reduction.

In line with the findings that social assistance, such as PKH and food assistance, has so far played a more dominant role as a driver of consumption than a driver of transformation, the government needs to reformulate the program so that it is no longer only short-term. Future policies ideally integrate conditional assistance schemes with individual skill improvement programs, entrepreneurship training, and support for access to business capital directed specifically at the processing industry and productive services sectors. In addition, the optimization of routine assistance schemes, which in this study has been proven to reduce the risk of falling into extreme poverty, also needs to be developed through the application of the graduation mechanism, so that individuals who are relatively established are encouraged to be independent and free from dependence on consumption assistance. Thus, social protection programs can transform from mere instruments of consumption risk mitigation to catalysts for individual economic mobility on the island of Java, so that they can move to more productive and sustainable sectors.

CONCLUSION

Based on the results of this study, the process of individual structural transformation in rural Java shows complex dynamics. The factor of internet use has proven to be significant in driving the shift from the primary sector to the non-agricultural sector, especially the processing industry sector. However, other variables such as savings ownership, education level, and phone use were still positively associated with the probability of surviving in the agricultural sector, indicating attachment to local social networks and assets owned. Meanwhile, access to cooperative credit also shows patterns that underpin the sustainability of the agricultural sector, demonstrating the importance of the role of traditional microfinance institutions in supporting agribusiness. These findings confirm that the transformation towards a more modern economic sector requires a special boost, especially through the optimization of the use of digital technology and more adaptive financing institutions.

In the context of poverty, this study shows that structural transformation to the non-agricultural sector has not significantly reduced the risk of falling into the extreme poverty category. However, it has been shown to contribute to lowering the probability of

individuals being in the poor (non-extreme) category. Factors such as savings, ownership, and phone use have been shown to reduce the risk of poverty. In contrast, internet use and credit access in some cases increase the probability of individuals being below the poverty line. In addition, environmental conditions in the form of drought remain a significant variable that increases the risk of extreme poverty. These results underscore the need for risk mitigation strategies that are integrated with productive economic development so that the structural transformation process can run more effectively in alleviating poverty.

Regarding the effectiveness of social protection programs, this study found that social assistance, such as KKS and food assistance, encourages individuals to switch more freely to the industrial sector. However, it is not strong enough to direct a shift to the service sector. Meanwhile, the PKH program plays a more significant role as a support for consumption associated with recipients from very poor groups. Therefore, social protection policies in the future need to be designed more progressively by integrating digital skills improvement, individual financial literacy, and entrepreneurial training that is relevant to the industrial and service sectors. Optimizing the graduation mechanism for aid recipients is also important so that social protection programs are not only an instrument of consumption mitigation, but can also be a catalyst for individual economic mobility on the island of Java to move to a more productive and sustainable sector.

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