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SINTA 2

Poverty Dynamics Analysis: A Case of Agricultural Households in Indonesia

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ABSTRACT

The first goal of the Sustainable Development Goals (SDGs) is to eradicate poverty by 2030. In Indonesia, achieving this goal requires particular attention to the agricultural sector, where a large share of the poor population is concentrated. This study examines poverty dynamics among agricultural households in Indonesia using data from the Indonesian Family Life Survey (IFLS) for 2007 and 2014, applying a spell approach. The findings indicate that temporary (transient) poverty accounts for 74.55% of total poverty, while chronic poverty constitutes 25.45%. Furthermore, the results from the ordered logit model reveal that dynamic poverty is significantly influenced by the household head's age and education level, household size, gender, access to electricity and financial credit, residential location (within or outside Java), as well as changes in household size, education level, access to credit, and land ownership.

Keywords: Dynamic poverty, Chronic poverty, Transient poverty, Agricultural households, Indonesia.

INTRODUCTION

Poverty remains a persistent challenge in developing countries, representing a complex and multidimensional phenomenon encompassing social, economic, political, cultural, spatial, and temporal dimensions (Badriah & Istiqomah, 2022). The global commitment to eradicating poverty by 2030 is reflected in the first goal of the Sustainable Development Goals (SDGs). Despite this commitment, existing evidence suggests that development programs have not been fully effective in reducing poverty, both globally and across developing countries (Omar & Inaba, 2020).

In Indonesia, the poverty rate has declined over time (Purwono et al., 2021), largely due to various government-led poverty alleviation initiatives. Following the establishment of a national poverty reduction committee in 2001, the government introduced the Internal Poverty Reduction Strategy Paper (I-PRSP) in 2003 as the foundation for the National Poverty Reduction Strategy (SNPK) (Bappenas, 2005). Since then, a range of programs has been implemented, primarily in the form of social assistance and subsidies aimed at strengthening households' short-term purchasing power (Nugroho et al., 2021). These include the Family Hope Program (Program Keluarga Harapan/PKH), the Smart Indonesia Program (Program Indonesia Pintar/PIP), the National Health Insurance Contribution Assistance (Penerima Bantuan Iuran Jaminan Kesehatan/PBI-JKN), the Prosperous Rice Program (Beras Sejahtera/Rastra), the Non-Cash Food Assistance Program (Bantuan Pangan Non-Tunai/BPNT), and various energy subsidies (Wardana et al., 2022). While these interventions have

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contributed to a reduction in poverty, the pace of poverty reduction has slowed in recent years (Purwono et al., 2021).

One explanation for this slowdown lies in the limitations of existing policy design, particularly regarding targeting and the predominance of short-term interventions. Many programs are not sufficiently targeted toward the most vulnerable households, while others focus primarily on immediate consumption support rather than addressing the structural determinants of poverty. For instance, price-based subsidies may be misallocated, as they are accessible to all consumers regardless of income level (Nugroho et al., 2021). This highlights the importance of improving targeting mechanisms and adopting more comprehensive approaches that address both short-term vulnerability and long-term structural constraints (Suryahadi et al., 2010).

Evaluating the effectiveness of poverty alleviation policies is inherently challenging, as their impacts often materialize over time. Short-term data may therefore be insufficient to capture the full extent of policy outcomes (Dartanto & Nurkholis, 2013). This limitation highlights the need for a dynamic perspective on poverty analysis, which allows for the analysis of transitions into and out of poverty over time. Unlike static measures, dynamic poverty analysis distinguishes between chronic poverty, which is persistent, and transient poverty, which is temporary and often driven by shocks. Such an approach provides a more comprehensive understanding of household welfare dynamics and the underlying mechanisms of poverty (Wardana & Sari, 2020).

In the Indonesian context, the agricultural sector plays a central role in poverty eradication efforts, as a large share of poor households depends on it for their livelihoods. According to Statistics Indonesia, the sector continues to account for the largest proportion of poor households, although this share has gradually declined (BPS, 2021). Persistent poverty in agriculture is closely associated with structural constraints, including low levels of education, limited access to productive assets, shrinking landholdings, and unequal land distribution (Moeis et al., 2020).

At the same time, the agricultural sector holds a strategic position in the broader economy due to its strong forward and backward linkages with other sectors, particularly industry. Its resilience was evident during the COVID-19 pandemic, when it maintained positive growth despite an overall economic contraction (BPS, 2020). However, this resilience has not been accompanied by a proportional reduction in poverty within the sector. A substantial share of poor households remains concentrated in agriculture, highlighting a disconnect between macroeconomic performance and household-level welfare (Arham & Dai, 2020). This paradox emphasizes the need for more targeted and effective poverty alleviation policies within the sector. Furthermore, empirical evidence suggests that agricultural growth has historically been more effective in reducing poverty than growth in other sectors (Christiaensen & Martin, 2018).

Against this background, this study examines poverty dynamics among agricultural households in Indonesia using a dynamic approach. Specifically, it aims to (i) classify poverty into chronic and transient components and (ii) identify the key demographic and socioeconomic factors influencing these dynamics. By focusing on the agricultural sector and adopting a longitudinal perspective, this study contributes to a deeper understanding of poverty transitions and provides policy-relevant insights for designing more effective and targeted poverty reduction strategies.

LITERATURE REVIEW

Definitions of poverty have evolved over time. From an analytical perspective, the concept of poverty was first formalized by Rowntree in 1901, who defined it as a household's inability to meet minimum nutritional requirements. By the 1990s, the concept expanded beyond basic needs to incorporate broader dimensions of well-being. The United Nations Development Programme (UNDP) defines well-being as the ability to live a long, healthy, and creative life, with a decent standard of living, as well as freedom, dignity, self-respect, and respect for others (Wardana & Sari, 2020).

Poverty should be understood as a dynamic phenomenon to capture the complex characteristics of populations experiencing deprivation. Sen (1981) argues that individuals—such as smallholder farmers and agricultural laborers—may both be classified as poor yet differ in the intensity and nature of their poverty. Therefore, poverty analysis should consider individuals within their social and occupational contexts. Classifying poverty based on severity is important not only for analytical and evaluative purposes but also for policy formulation, as different conditions require different interventions. Moreover, relying on a single dimension of poverty may lead to incomplete or misleading conclusions (Hulme & Shepherd, 2003).

In the literature on dynamic poverty, poverty is typically categorized into chronic and transient poverty. Chronic poverty refers to long-term, persistent deprivation, whereas transient poverty is temporary in nature (Bayudan-Dacuycuy, C., & Lim, 2012). Furthermore, Bayudan-Dacuycuy, C., & Lim (2013) distinguish these categories by duration: poverty experienced only briefly is considered transient, while sustained poverty over time is classified as chronic. Empirical studies on dynamic poverty in Indonesia reveal substantial variation in the relative shares of these two categories, depending on the data and methodology employed.

Using IFLS data from 1993 and 1997 and applying the spell approach, Alisjahbana and Yusuf (2003) found that chronic poverty accounted for 29.1% of total poverty, while transient poverty constituted 70.9%. In contrast, Widyanti et al. (2011), using a similar approach, reported higher chronic poverty (41.2%) and lower transient poverty (58.8%). Meanwhile, Dartanto and Nurkholis (2013), using SUSENAS data from 2005 and 2007, found much lower shares—3.4% chronic poverty and 14.6% transient poverty—indicating that 82% of households were not poor.

Further studies also highlight methodological sensitivity in measuring dynamic poverty. Akita et al. (2010), using a component approach on SUSENAS data from 2008 to 2010, found that chronic poverty accounted for 34.62% and transient poverty for 65.38%. Purwono et al. (2021), employing three approaches (spell, component, and Equally Distributed Equivalent/EDE), demonstrate considerable variation across methods. The spell approach yields 6.7% chronic poverty and 17% transient poverty (with 76.34% never poor), implying that among the poor, 28.28% are chronically poor and 71.72% are transiently poor. The component approach shows 47% chronic and 53% transient poverty, while the EDE approach suggests a dominance of chronic poverty at 63%, compared to 37% transient poverty. Similarly, Wardana and Sari (2020) find that chronic poverty dominates (78%) relative to transient poverty (22%) using the EDE approach.

A range of socioeconomic and demographic factors influence poverty dynamics. Social characteristics—such as the education level of the household head, access to electricity, access to credit, and residential location—play a

significant role. Education is consistently found to have a negative relationship with poverty (Dartanto & Nurkholis, 2013; Akita et al., 2010; Purwono et al., 2021). Purwono et al., (2021) suggest that education primarily reduces chronic poverty, while its effect on transient poverty is limited. However, Edig and Schwarze (2011) find that higher education may increase the likelihood of temporary poverty, as households investing in education may temporarily forgo income-generating opportunities.

Access to electricity and credit has also been shown to reduce the likelihood of poverty (Dartanto & Nurkholis, 2013; Dartanto & Otsubo, 2016). In addition, poverty is more prevalent in rural areas than in urban areas (Akita et al., 2010; Bayudan-Dacuycuy & Lim, 2013; Dartanto & Nurkholis, 2013; Dartanto & Otsubo, 2016; Widyanti et al., 2011). Economic assets, particularly land ownership, are also important determinants of poverty status (Dartanto & Nurkholis, 2013).

Demographic factors further shape poverty outcomes. Household size is positively associated with poverty, as larger households tend to face greater resource constraints (Woolard & Klasen, 2005). This relationship holds in both urban and rural settings, with poverty incidence increasing alongside household size (Akita et al., 2010). Additionally, households headed by women are more likely to experience poverty, often due to lower income levels associated with the absence or loss of a male household head (Edig & Schwarze, 2011).

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METHODOLOGY

This study utilizes secondary data from the latest available Indonesian Family Life Survey (IFLS) for the year 2007 and 2014. The selection of 2007 and 2014 is primarily driven by considerations of data availability and suitability for poverty analysis. While more recent agricultural datasets exist—such as the Agricultural Survey (Sensus/Survei Ongkos Pertanian, e.g., 2018)—these datasets do not contain detailed information on household expenditure or consumption, which is essential for constructing poverty indicators. Furthermore, most agricultural datasets in Indonesia are cross-sectional, limiting the ability to observe changes in household welfare over time. To address this limitation, this study utilizes the Indonesian Family Life Survey (IFLS), which provides a panel data structure with consistent measures of both agricultural participation and household consumption. This panel structure is well aligned with the objective of examining household poverty dynamics within the agricultural sector. Moreover, given the structural persistence of the agricultural sector in Indonesia, which evolves gradually rather than undergoing abrupt transformation, these periods remain informative for understanding the relationship between agriculture and household poverty.

Household welfare is proxied by per capita consumption expenditure, which is subsequently compared to the poverty line defined by Statistics Indonesia (BPS), differentiated by province and rural–urban areas. Poverty dynamics are analyzed using the spell approach, which classifies households into chronic and transient poverty categories. Households is classified as chronically poor if its per capita consumption expenditure falls below poverty lines both in 2007 and 2014. In contrast, transient poor households are those whose per capita income falls below poverty line either in 2007 or 2014.

To examine the determinants of poverty dynamics, this study employs an ordered logit regression model, as the dependent variable is ordinal in nature. The dependent variable is categorized into three groups: 0 = never been poor, 1 = transient poverty, and 2 = chronic poverty. The ordering reflects increasing

severity of poverty, where households that have never been poor are considered better off than those experiencing transient poverty, and transiently poor households are better off than those experiencing chronic poverty. Following Dartanto and Nurkholis (2013) and Moeis et al. (2020), the empirical model is specified as follows:

$$\begin{aligned} Dynamic_i = {} & \beta_0 + \beta_1 Age_i + \beta_2 Agesquare_i + \beta_3 HHsize_i \\ & + \beta_4 Gender_i + \beta_5 SD_i + \beta_6 SMP_i + \beta_7 SMA_i \\ & + \beta_8 PerguruanTinggi_i + \beta_9 Electric_i + \beta_{10} Credit_i \\ & + \beta_{11} Rural_i + \beta_{12} Java_i + \beta_{13} Land_i + \beta_{14} Extension_i \\ & + \beta_{15} \Delta HHsize_i + \beta_{16} \Delta Education_i + \beta_{17} \Delta Electric_i \\ & + \beta_{18} \Delta Credit_i + \beta_{19} \Delta Land_i + \varepsilon_i \end{aligned} \quad (1)$$

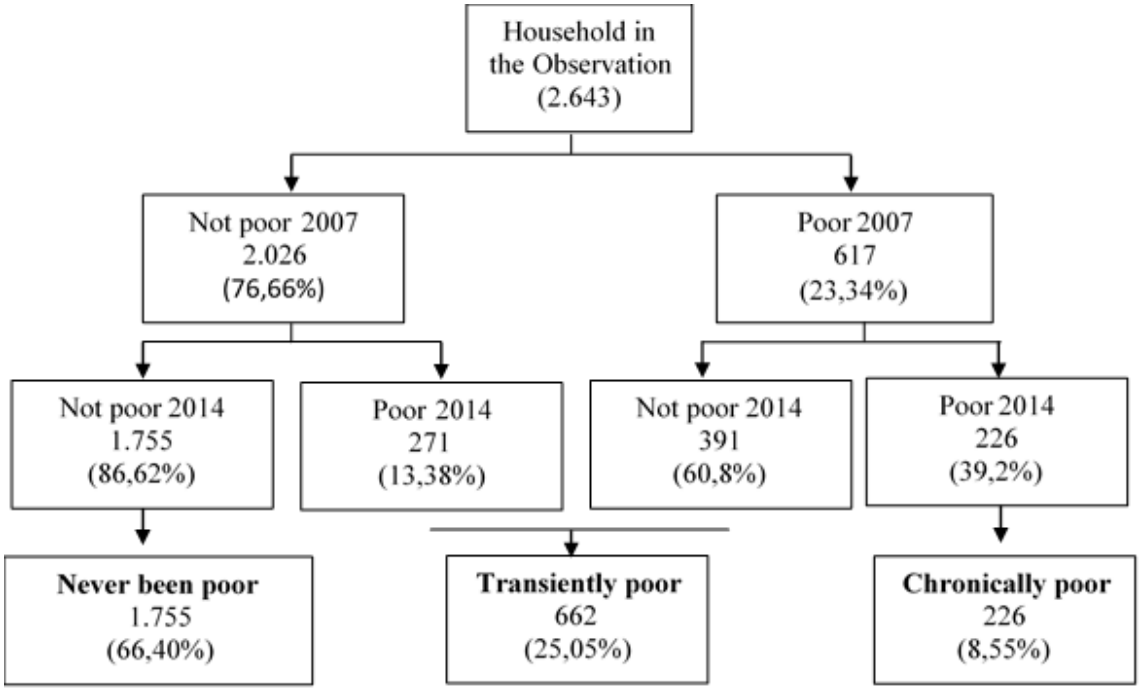
where:

$\beta_0; \beta_1; \ldots; \beta_{19}$	:	Estimated coefficients
i	:	Households i[th]
Dynamics	:	Poverty dynamics, where 2 = chronically poor, 1 = transiently poor, and 0 = never been poor
Age	:	Age of the household head
Agesquare	:	Squared age of the household head
HHsize	:	Household size
Gender	:	Dummy variable for the gender of the household head (1 = male, 0 = female)
Education dummies		
No_school	:	1 = no formal education, and 0 = otherwise (Reference)
SD	:	1 = completed elementary school, 0 = otherwise
SMP	:	1 = completed junior high school, 0 = otherwise
SMA	:	1 = completed senior high school, 0 = otherwise
Perguruan Tinggi	:	1 = completed tertiary education, 0 = otherwise
Socioeconomic variables		
Electric	:	Dummy for access to electricity (1 = has access, 0 = otherwise)
Credit	:	Dummy for access to credit (1 = has access, 0 = otherwise)
Rural	:	Dummy for residential location (1 = rural, 0 = urban)
Java	:	Dummy for region (1 = located in Java, 0 = outside Java)
Land	:	Dummy for land ownership (1 = owns land, 0 = otherwise)
Extension	:	Dummy for access to agricultural extension services (1 = receives counseling, 0 = otherwise)
Dynamic (change) variables (2007–2014)		
ΔHHsize:	:	Dummy for change in household size (1 = household size increased, 0 = otherwise)
ΔEducation	:	Dummy for change in education level of the household head (1 = increased, 0 = otherwise)
ΔElectric	:	Dummy for change in electricity access (1 = no access in 2007 and access in 2014, 0 = otherwise)
ΔCredit	:	Dummy for change in credit access (1 = no access in 2007 and access in 2014, 0 = otherwise)

ΔLand	:	Dummy for change in land ownership (1 = did not own land in 2007 and owned land in 2014, 0 = otherwise)
ε	:	Error term

RESULT AND DISCUSSION

The IFLS dataset comprises 2,643 agricultural households in Indonesia. Dynamic poverty is measured using the spell approach, which classifies households based on the duration of their poverty status over time. The results are presented in Figure 1. At the national level, 66.40% of households are categorized as never been poor, 25.05% as transiently poor, and 8.55% as chronically poor. When focusing only on households that experienced poverty**,** transient poverty accounts for 74.55%, while chronic poverty constitutes 25.45% of total poverty among agricultural households in Indonesia.



Source: IFLS 4 (2007) and IFLS 5 (2014)

Figure 1
Dynamic poverty of the household in the agriculture sector

These findings indicate that poverty in the agricultural sector is predominantly temporary rather than persistent, suggesting that many households move in and out of poverty over time. This pattern is consistent with the high exposure of agricultural households to income volatility, driven by factors such as seasonal production cycles, price fluctuations, weather shocks, and limited access to risk-mitigating instruments.

From a policy perspective, the dominance of transient poverty implies that short-term vulnerability and shocks are key drivers of poverty in the agricultural sector. As a result, policies aimed at consumption smoothing and risk protection—such as targeted cash transfers (e.g., PKH), food assistance (BPNT), and agricultural insurance schemes—can play an important role in preventing households from falling into

poverty during adverse periods (Purwono et al., 2021; Sugiharti et al., 2022). Improving access to credit and financial services is also crucial, as it enables households to manage shocks without resorting to distress coping strategies.

However, the presence of 25.45% chronic poverty among the poor highlights a structurally vulnerable group that remains trapped in long-term deprivation. For these households, short-term assistance alone is insufficient. Instead, structural interventions are required, including improving access to education, expanding productive assets such as land, strengthening rural infrastructure, and enhancing agricultural productivity through extension services and technology adoption (Purwono et al., 2021).

The results of the ordered logit estimation are presented in Table 1. Since the coefficients from an ordered logit model only indicate the direction of the relationship, interpretation relies primarily on odds ratios and marginal effects.

Table 1
Estimation of the Dynamic Poverty Determinant

Variable	Ordered Logit		Marginal Effect		
	Coefficient	Odds Ratio	Never Poor	Transient	Chronic
Demographic Variable:					
Age	-0.0799*** (0.0197)	0,9231	0,0164*** (.0040)	-0,0104*** (.0025)	-0,0060*** (.0015)
Agesquare	0.0008*** (0.0002)	1,0008	-0,0001*** (.0000)	0,0001*** (.0000)	0,0000*** (.0000)
Hhsize	0,2206*** (0.0275)	1,2468	-0,0453*** (.0054)	0,0287*** (.0034)	0,0166*** (.0022)
Gender	-0,3524** (0.1489)	0,7029	0,0724** (.0305)	-0,0458** (.0193)	-0,0265** (.0112)
Socio Economic Variable:					
SD	-0,3062*** (0,1056)	0,7362	0,0629*** (.0215)	-0,0398*** (.0136)	-0,0230*** (.0080)
SMP	-0,2309* (0.1229)	0,7937	0,0474* (.0251)	-0,0300* (.0159)	-0,0173* (.0092)
SMA	-0,50342*** (0,1664)	0,6044	0,1034*** (.0340)	-0,0655*** (.0215)	-0,0378*** (.0126)
Perguruan Tinggi	-2,0837*** (0.7487)	0,1244	0,4282*** (.1533)	-0,2713*** (.0972)	-0,1568*** (.0570)
Electric	-1,3440*** (-0.3697)	0,2607	0,2762*** (.0754)	-0,1750*** (.0480)	-0,1011*** (.0281)
Credit	-0,6106***	0,5429	0,1255***	-0,0795***	-0,0459***

	(0,1328)		(.0269)	(.0170)	(.0102)
Rural	-0,1612	0,8510	0,0331	-0,0210	-0,0121
	(0.1154)		(.0236)	(.0150)	(.0087)
Java	0,4611***	1,5859	-0,0947***	0,0600***	0,0347***
	(0.0892)		(.0180)	(.0114)	(.0069)
Land	0,0492	1,0505	-0,0101	0,0064	0,0037
	(0,0979)		(.0201)	(.0127)	(.0073)
Extension	0,0845	1,0882	-0,0173	0,0110	0,0063
	(0,0926)		(.0190)	(.0120)	(.0069)
Change Variable					
ΔHHsize	0,2212**	1,2475	-0,0454**	0,02881**	0,0166**
	(0,0952)		(.0195)	(.0123)	(.0072)
ΔEducation	-0,5112***	0,5997	0,1050***	-0,0665***	-0,0384***
	(0,1444)		(.0294)	(.0186)	(.0110)
ΔElectric	-0,5309	0,5880	0,1091	-0,0691	-0,0399
	(0,3858)		(.0792)	(.0502)	(.0290)
ΔCredit	-0,6045***	0,5463	0,1242***	-0,0787***	-0,0455***
	(0,1274)		(.0258)	(.0163)	(.0099)
ΔLand	-0,22834*	0,7532	0,0582*	-0,0369*	-0,0213*
	(0,1676)		(.0343)	(.0217)	(.0126)
/cut1	-1,8154	-1,8154			
	(0.5980)	(0.5980)			
/cut2	-0,02169	-0,02169			
	(0,5970)	(0,5970)			
N	**2.643**	**2.643**			
Pseoudo R^2	**0,0517**	**0,0517**			
LR Test	**226,66**	**226,66**			
Prob > Chi^2	**0,0000**	**0,0000**			

Note: standard error in the brackets; * p<0.10, ** p<0.05, * **p<0.01.
Source: IFLS 4 (2007) and IFLS 5 (2014)

The age of the household head has a negative and statistically significant effect on dynamic poverty, while the squared age term is positive and significant, indicating a non-linear (U-shaped) relationship. This suggests that as the household head becomes older, the probability of falling into poverty initially declines, reflecting accumulated experience and productivity. However, beyond a certain age, the probability increases again, likely due to declining physical capacity. On average, a one-year increase in age reduces the probability of

transient poverty by 1.04% and chronic poverty by 0.06%, ceteris paribus. This finding is consistent with previous studies (Dartanto & Otsubo, 2016; Edig & Schwarze, 2011; Taufiq, 2017), which highlight the role of experience in improving economic resilience.

Household size exhibits a positive and significant effect on poverty. An additional household member increases the probability of transient poverty by 2.8% and chronic poverty by 1.6%. This reflects the dilution of household resources, where income must be shared among more members, thereby reducing per capita consumption (Dartanto & Nurkholis, 2013; Wardana & Sari, 2020).

The gender of the household head also plays a significant role. Male-headed households have a lower probability of poverty, reducing the likelihood of transient poverty by 4.5% and chronic poverty by 2.6% compared to female-headed households. This aligns with the literature indicating that female-headed households are generally more vulnerable due to structural disadvantages in labor markets and income opportunities (Zhang et al., 2025). This result suggests the need for targeted policy interventions aimed at reducing gender-based disparities in the agricultural sector. Policies should focus on improving female-headed households' access to productive assets, including land, credit, agricultural inputs, and extension services (Carranza, et al., 2023)

Education emerges as one of the strongest determinants of dynamic poverty. All education levels (elementary, junior high, senior high, and tertiary) show negative and significant effects, indicating that higher educational attainment substantially reduces the likelihood of both transient and chronic poverty. The magnitude of the marginal effects increases with the level of education. For example, completing tertiary education reduces the probability of transient poverty by 27.1% and chronic poverty by 15.6%, compared to individuals with no formal education. These findings confirm that education enhances human capital, productivity, and the ability to cope with economic shocks (Dartanto & Nurkholis, 2013; Dartanto & Otsubo, 2016; Moyo et al., 2022).

Access to electricity significantly reduces poverty risk. Households with electricity access are 17.5% less likely to experience transient poverty and 10.1% less likely to experience chronic poverty. This reflects the role of infrastructure in improving productivity, reducing costs, and enabling better access to information and opportunities (Bhatta & Sharma, 2011; Moeis et al., 2020).

Similarly, access to credit has a negative and significant effect, reducing the probability of transient poverty by 7.9% and chronic poverty by 4.5%. Credit serves as both a consumption-smoothing mechanism and a source of productive investment, enabling households to withstand shocks and improve income-generating activities (Dartanto & Otsubo, 2016).

The rural dummy variable is not statistically significant, suggesting no systematic difference in dynamic poverty between rural and urban agricultural households. This may reflect the concentration of agricultural activities—and related policy interventions—in rural areas. In contrast, the Java dummy is positive and significant, indicating that households residing in Java face a higher risk of poverty. Specifically, the probability of transient poverty increases by 6%, and chronic poverty by 3.4%, compared to households outside Java. This finding aligns with a study by Moeis et al., (2020) stating that residing in Java is associated with higher probability of being poor.

Land ownership does not have a statistically significant effect, suggesting that owning land alone is insufficient to reduce poverty. This is likely due to the dominance of smallholder farming in Indonesia, where land size and productivity remain limited (Haryanto et

al., 2023). Previous studies also highlight that land ownership does not automatically translate into higher income without adequate management (Alais & Magoti, 2021).

Similarly, participation in extension programs does not significantly affect poverty dynamics. This may indicate inefficiencies in program implementation, weak targeting, or limited effectiveness in improving farmers' long-term productivity and welfare (Maulu et al., 2021).

Changes in household characteristics over time provide additional insights. An increase in household size between 2007 and 2014 significantly raises the probability of both transient (2.8%) and chronic poverty (1.6%), reinforcing the importance of demographic pressure on household welfare. Conversely, improvements in education significantly reduce poverty risk. Households whose heads experienced an increase in education levels are 6.6% less likely to fall into transient poverty and 3.8% less likely to fall into chronic poverty. This highlights the long-term benefits of human capital accumulation (Collin & Wein, 2020).

Changes in electricity access are not statistically significant, likely due to the relatively small number of households experiencing such changes during the observation period. In contrast, increased access to credit significantly reduces poverty risk, lowering the probability of transient poverty by 7.8% and chronic poverty by 4.5%. This underscores the importance of expanding financial inclusion, particularly through microfinance institutions (Haryanto et al., 2022).

Finally, gaining land ownership between 2007 and 2014 significantly reduces poverty risk, decreasing the probability of transient poverty by 3.6% and chronic poverty by 2.1%. This finding supports policies aimed at land redistribution and land certification, which can enhance household security and productive capacity (Hammond et al., 2023).

The results highlight that dynamic poverty in agricultural households is shaped by a combination of demographic pressure, human capital, access to infrastructure, and financial inclusion. Education and credit access emerge as the most robust protective factors, while household size and structural constraints in Java increase vulnerability. These findings reinforce the need for integrated poverty alleviation strategies, combining short-term support (e.g., credit access and social protection) with long-term structural interventions (e.g., education, land reform, and rural development).

CONCLUSIONS

This study shows that poverty among agricultural households in Indonesia is predominantly transient rather than chronic, indicating that most households experience poverty temporarily rather than being persistently trapped in it. The findings further reveal that dynamic poverty is shaped by a combination of demographic and socioeconomic factors, particularly the household head's age, education level, household size, gender, as well as access to electricity and credit, and regional location. In contrast, rural–urban location, land ownership, and participation in extension programs do not appear to play a significant role in explaining poverty dynamics, suggesting that structural and institutional factors may limit their effectiveness. The dominance of transient poverty implies that short-term vulnerability and exposure to economic shocks are key drivers of poverty in the agricultural sector, highlighting the importance of strengthening social protection and improving households' resilience. At the same time, the persistence of chronic poverty among a smaller group of households underscores the need for long-term, structural

interventions. In this regard, expanding access to education, credit, and basic infrastructure, along with more effective land redistribution policies, can help reduce both forms of poverty. Given the strong influence of household size, enhancing the effectiveness of family planning programs remains important, while investments in human capital and agricultural skills development are essential to improving productivity and long-term welfare. The limited impact of existing extension programs suggests the need for better targeting, particularly toward poorer households rather than those already relatively better off. Overall, poverty alleviation strategies should prioritize vulnerable groups, including female-headed households, low-educated households, larger families, and those lacking access to financial and basic services. Future research may further refine these findings by addressing potential selection bias, incorporating more recent data, and considering additional dimensions such as infrastructure, health, and women's empowerment to better capture the evolving nature of poverty in agricultural communities.

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