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Do Household Financial Behaviors affect Poverty in Indonesia?: Evidence from Indonesian Family Life Survey

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Abstract

Poverty is a multidimensional phenomenon that can be measured by variety of approaches. The measurements of poverty based on consumption levels are not sufficient to explain various shortcomings faced by the poor. Household financial behavior that tends to be dynamic will indirectly affect household income patterns. Using data from the Indonesian Family Life Survey (IFLS) wave 5, this study aimed to identify the impact of household financial behavior on poverty in Indonesia. The results of analysis using Tobit Regression showed that the levels of financial vulnerability, financial literacy, education level, arisan or the rotating economy of savings and credit associations (ROSCAs), and total credit have a negative, significant relationship in influencing poverty. This means that when this variable increases, it will reduce poverty in Indonesia. Meanwhile, the location of residence, either in village or city, has a positive, significant relationship which implies that the location of residence has an impact on the poverty level in Indonesia.

Keywords: Poverty, Household Financial Behavior, Tobit Regression
JEL Classification: I32, G40, C39

INTRODUCTION

The results of development activities can be assessed in various ways and benchmarks by either an economic approach or non-economic approach. Measurement or assessment with an economic approach generally uses the level of income as a measurement. The benchmarks for the amount of income include income per capita, income distribution, and poor people income or poverty level (Todaro & Smith, 2020). On the other hand, Jayasinghe (2022) defines poverty as a condition other than food shortages, such as lack of nutrition, illiteracy, lack of civil liberties and democratic rights, discrimination, disease, and various forms of deprivation of private property rights. Wfith more concrete indicators, poverty is indicated by the absence of: (1) human resources (good health, education, and nutrition) (Jalilian & Kirkpatrick, 2005; Samer et al., 2015); (2) business capital (Hossen et al., 2019; Polloni-Silva et al., 2021); (3) Infrastructure (roads, electricity, clean water, sanitation, environmental protection and other public facilities) (Dhrifi, 2013; Haughton & Khandker, 2009); (4) natural capital (Schrieder & Sharma, 1999); (5) public institutional capital (Arifin & Ghofur, 2020; Ndlovu & Toerien, 2020); and (6) knowledge capital (Bernards, 2021; Gennetian & Shafir, 2015).

The diversity of measurement of poverty is directed to produce more accurate measurements (Malhotra, 2018; Schubert, 2020). Moreover, there are facts that the characteristics of rural and urban areas are spatially different which result in different costs of living (Bansal & Bansal, 2012; Samer et al., 2015). Poverty can appear in various dimensions, due to the impact of natural (Hallegatte et al., 2020), remoteness of an area (Abosedra et al., 2015), dependence and limited ability to access various basic social services such as education (Seven & Coskun, 2016) and health (Azeem et al., 2017; Li et al., 2019; Mohammed et al., 2017), to household financial behavioral problems such as financial literacy (Ayyagari et al., 2019; Mushtaq & Bruneau, 2019; Park & Mercado, 2015), financial inclusion (Erlando et al., 2020; Mohammed et al., 2017; Ratnawati, 2020; Trianto et al., 2018), arisan or the rotating economy of savings and loan associations (ROSCAs) (Kharisma et al., 2020), and loans (Banerjee & Jackson, 2017; Yadav et al., 2018).

Household financial behavior that seeks to increase individual ownership of financial transactions, ownership of savings accounts, payment facilities, and access to credit, will have an impact on the welfare of individuals and households through the increased tendency to start a business, financial empowerment, investment in education and health, and risk management (Churchill & Marisetty, 2019; Dupas & Robinson, 2013; Zhang & Posso, 2017). In terms of welfare, household financial behavior is widely recognized as having the capacity to reduce weakness (Mohammed et al., 2017; Park & Mercado, 2015) and vulnerability to poverty (Choudhury, 2014), as well as helping achieve the inclusive economic growth (Andrianaivo & Kpodar, 2011; Imai et al., 2010). Apart from these concepts and evidence, studies at the household level that focus on the relationship between household financial behavioral and poverty are interested to explore since a number of households that are currently not poor are likely at risk of experiencing poverty in the future (Ozughalu, 2016; Swamy, 2014). As shown by the results of Coulibaly's (2019) study, it is estimated that by the end of 2019, Africa is at risk of becoming home to 70 percent of the world's poor people and by 2030, 13 African countries are at risk of experiencing an increase in the proportion considered very poor.

The results of Ozughalu's (2016) study show that there is a positive, significant correlation between the level of non-food consumption, savings, and financial access and poverty vulnerability in Nigeria, although the correlation is not very strong. The same thing is also shown by the research by Churchill & Marisetty (2019) in India which found that financial behavior indicated by people's decisions to manage savings and financial inclusion was effective in reducing poverty.

An interesting finding from Imai et al. (2015) in Vietnam and India shows that access to non-agricultural jobs and their type of work significantly reduces vulnerability of poverty in both countries. This explains that household activities to the non-agricultural sector will reduce the risk. However, it has a quite negative, significant relationship in the rural poor community as they tend not to have easy access to non-agricultural work.

Research developed by Kharisma et al. (2020) on the effect of arisan or ROSCAs on poverty in Indonesia found that women's participation in ROSCA can reduce poverty significantly. Men's participation in ROSCAs can also reduce have very little or no access to banking services. A possible solution to this financial gap is to make microfinance institutions open to the whole community and bring banking services in their capacity to the poor. This requires two main actions: bringing banking services to the doorsteps of poor households and making services friendly to poor households through microfinance institutions (e.g. entry requirements for financial institutions with affordable interest rates).

Table 5. Tobit Model Regression Results

Variable	Model 1		Model 2		Model 3	
	Coeff (Robust Std. Error)	**Prob.**	**Coeff (Robust Std. Error)**	**Prob.**	**Coeff (Robust Std. Error)**	**Prob.**
FVI	0, 142 (0,101)	0,197	0,081 (0,058)	0,138	-0,067** (0,024)	0,009
Household Ownership	0,510*** (0,175)	0,000	0,184*** (0,087)	0,000	-0,009 (0,002)	0,154
Education	0, 103 (0,172)	0,298	-0,124*** (0,053)	0,007	-0,092*** (0,020)	0,000
Financial literation	-0,746** (0,411)	0,025	-0,216 (0,174)	0,147	-0,240*** (0,085)	0,001
Job status	0,490** (0,239)	0,046	0,138 (0,082)	0,268	0,102* (0,049)	0,051
ROCAs	-0,086 (0,054)	0,159	-0,021** (0,006)	0,010	-0, 012*** (0,002)	0,000
Location	0, 707*** (0,358)	0,002	0,608*** (0,162)	0,000	0, 821*** (0,087)	0,000
Food consumption	-1,816 (2,006)	0,345	-1,896** (8,107)	0,028	1,957 (4,347)	0,634
Non-food consumption	9,337 (1,336)	0,353	-	-	7,438 (2,019)	0,246
Income	-3,189 (1,789)	0,186	-4,590 (1,329)	0,805	-	-
Marital status	0,036 (0,261)	0,843	0,060 (0,105)	0,553	-	-
Total loan	-8,189** (3,529)	0,012	-1,319 (1,229)	0,301	-1,429*** (1,390)	0,000
Health condition	-0,074 (0,197)	0,571	0,014 (0,082)	0,837	0,022 (0,033)	0,513
Loan status	0, 680 (0,439)	0,136	-	-	-	-
Prob > F	0,0000		0,0000		0,0000	
Pseudo R^2	0,2442		0,0940		0,0720	

Notes: *) Significant α 10%; **) Significant α 5%; ***) Significant α 1%
Source: data processed (2022)

By testing the significance of 1%, 5%, and 10%, the results show that Model 1 has a significant relationship with household poverty in Indonesia, including household ownership, financial literacy, job status, location, and total loan variables. Model 2, by eliminating 2 variables, there is a significant relationship, namely education, job status, ROCAs, and location. Meanwhile, Model 3 shows

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(Gathergood, 2012; Lusardi & Mitchell, 2014). Financial inclusion can be developed by improving the financial sector, regulation, and increasing public awareness related to financial literacy which can later be used to reduce poverty levels. (Wardhono et al., 2016, 2019). Thus, financial literacy has a positive role in improving people's welfare or reducing poverty levels.

This condition further emphasizes that education is an important variable in poverty alleviation (Awan et al., 2011). In models 1, 2, and 3, education and employment status variables have a negative relationship to poverty. That is, the higher the level of education of a person, the lower the poverty decreases. This is in line with the research by Quach et al. (2005) in Vietnam which confirms that the policy of increasing formal education and informal trainingis significantly able to reduce poverty in Vietnam. Individuals or households can meet all their needs from an increase in income. This is reaffirmed by Ijaiya et al. (2018) that the level of education can reduce the level of household poverty. Similarly, Khairati & Syahni (2020) explain that low levels of education are a source of household poverty. The higher the education level, the greater the opportunity to gain access to job information, markets, credit facilities, health and personal development. This is consistent with previous research which states that the higher the level of education, the higher the possibility of finding a job with a good income (Imai et al., 2010; Kimuyu, 1999; Yusuf et al., 2009). With a high level of education, people have the skills and broad opportunities to find work that creates the possibility to move away from poverty. Based on these conditions, education and financial literacy have an indirect effect on poverty alleviation efforts in Indonesia. Inclusive education can be a way out to lift themselves out of poverty. This needs changes in the value system of the importance of education, the importance of parental and state support to generate educational dynamism from within, and focus on improving the quality of education.

The type of domestic work is closely related to the individual's level of education because, in general, the higher the level of education, the greater the salary that will be received by workers. This is supported by the results of research showing that employment status has an effect and has a negative relationship with poverty. The higher the education level in a household, the more likely households work in the formal sector and result in an increase in income which later decrease the household poverty level. The research results are in accordance with the research of Khan et al. (2015) finding that employment has a significant impact on household poverty in rural areas. Furthermore, households that have jobs can reduce poverty. The opening of wider job opportunities and the existence of training and education programs for workers in improving work skills can reduce unemployment rates and can indirectly reduce household poverty levels.

In addition, the level of welfare can be seen from the ability of households to fulfill household food consumption (Backiny-Yetna et al., 2017; Rose et al., 2020). Household consumption can be divided into two, namely food consumption and non-food consumption. Non-food consumption has no significant effect on poverty because non-food expenditure has a relatively smaller frequency than food consumption. Food consumption is a primary expenditure that is always carried out by households while non-food consumption is a form of secondary/tertiary needs of households. Therefore, when non-food consumption increases, this will not directly reduce the level of household poverty. Other results show that, in model 2, the relationship between food consumption and poverty has a significant negative relationship. The relationship between food consumption and poverty is related to the fulfillment of individual and household/group nutrition. In this case, health conditions and food consumption patterns can affect individual activities such as decreased work capacity and absenteeism from work. This causes a person or a household that has a low level of consumption to have a low level of productivity, so that individuals or households are unable to meet a decent standard of living. This is in line with Gibson (2016) research which shows that fulfilled household food consumption can reduce poverty.

Poverty is the main target of the Sustainable Development Goals (SDGs) program. Reducing the poverty rate continues to be the main focus of the government, including in Indonesia, so that the role of the government and society is needed in breaking the cycle of poverty. One effort to eradicate poverty is through access to formal and informal financial institutions. In Indonesia, there are still many people, especially in rural areas, who have difficulty in accessing formal financial institutions but prefer informal institutions as a means of access to saving and borrowing, which are commonly known as arisan or Rotating Saving and Credit Associations (ROSCAs). ROSCAs acts as a savings and loan facility and benefit for the poor to overcome urgent financial problems (Anggraeni, 2009; Yusuf et al., 2009).

Individuals or poor households in meeting their needs can do various ways, such as making loans or participating in arisan. The results in Table 5 show that participation in arisan (ROSCAs) is proven to be able to reduce the level of poverty in Indonesia. The results of this study are supported by the research by Kharisma et al. (2020) showing that arisan can be used as a tool to reduce poverty levels. Individuals or households can use the money earned from arisan (ROSCAs) for various purposes, such as adding assets, expanding business capital, etc. Acquah & Dahal's (2018) study also state that ROSCAs helped individuals and families to overcome financial problems during the 1998 economic crisis in Indonesia. ROSCAs have benefits for the welfare of society where ROSCAs money is used to pay for daily needs, so that they can get out of the poverty line (Imai et al., 2010; Kimuyu, 1999; Yusuf et al., 2009). Tayo et al. (2017) also confirm that loan funds can be used to meet other tertiary needs such as that of the Nigerian community, namely to finance funerals and wedding celebrations. The allocation of funds received can be adjusted to the needs of each individual. This condition explains that receiving funds from third parties and participating in arisan are able to provide additional funds to meet the necessities of life.

Koomson et al. (2020) explain that financial inclusion in Ghana can reduce poverty and poverty vulnerability which more commonly occur in rural areas than urban areas. This is in accordance with the problems that occur in Indonesia; that is, rural poverty is greater than poverty in urban areas. This confirms the results of this study that the location of residence also affects poverty alleviation efforts. On the other hand, the results of the study also explain that income has no significant effect on poverty. This can be because poverty is not only seen from the amount of income but also from a multidimensional approach, such as in the education aspect. Indeed, Indonesian people have a low level of education so that a development strategy is needed to enable individuals or households to manage their income well and not focus on one economic sector.

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The household environment of low-income individuals and families creates a number of barriers and inconveniences that affect financial decisions and behavior (Haushofer & Fehr, 2014). Instead of being served by local bank branches, it turns out that households in low-income neighborhoods have more options for alternative financial services (Mani et al., 2013). The informal credit market, which includes lenders, pawnshops, and shop or house rentals, has higher interest rates and faces a greater limit to the amount of money that can be borrowed. For this reason, the liquidity of low-income households tends to be more constrained than that of households above the poverty threshold (Haushofer & Fehr, 2014). This becomes clear if the financial behavior of poor households will be able to support their lives and provide credit repayments mostly in the long term.

Living in a low-income neighborhood is also stressful (Chibba, 2009; Laajaj, 2017). Low-income areas are characterized by higher rates of violence and crime, poorer access to health care, and fewer and less comprehensive social support services. Therefore, it is necessary to improve the environment that is beneficial for family welfare, such as mental and physical health (Chetty et al., 2016). These findings indicate the possibility of programs in the social sector, such as vouchers or cash and non-cash transfer programs that are suitable to assist low-income families in building assets and being able to live in less-poor environments.

Poverty alleviation can also be addressed by developing the financial sector to enable the poor to access or expand their access to financial services such as credit (Jalilian & Kirkpatrick, 2005; World Bank, 2001). One of the main components of the government's poverty reduction strategy is ensuring the poor to have access to credit. Several empirical findings indicate that access to credit has a positive impact on household economic well-being (Khandhaker, 2003; Remenyi & Quinones, 2000; Wright, 2000). Another study from Quach et al. (2005), confirms that credit has a positive relationship with household welfare. In other words, it helps alleviate poverty.

Based on the results of the description, it is recommended that the government increase the level of household financial behavior, in this case financial literacy, by providing more resources to improve the regulatory and institutional framework that promotes poor households' access to the financial system. In addition, the government is encouraged to design policies that provide the necessary business environment for financial institutions to operate and extend services to more remote areas. The expansion of these services increases the provision of more supply-side indicators of household financial behavior, which also leads to improvement in demand-side indicators. By expanding services to reduce distances to financial institutions, current and future poverty risks are expected to decrease. This recommendation has indirectly been contained in the National Strategy for Indonesian Financial Literacy 2021-2025. The pillars used in the there are financial competence, wise financial attitudes and behavior, and access to finance. Each pillar has detailed programs that can be implemented to improve financial literacy. Financial literacy or this level of education is a financial behavior needed by the Indonesian people to reduce poverty levels. These results are in accordance with the results of research showing that financial literacy and education are variables that have a significant negative effect on poverty.

CONCLUSION

An economic phenomenon that has a multidimensional nature is poverty. Various kinds of poverty indicators have been studied. The results of this study indicate that the level of financial vulnerability, financial literacy, education level, arisan (ROSCAs), and total loans have a significant negative relationship in influencing poverty. That is, when this variable increase, it will have an impact on reducing poverty in Indonesia. Meanwhile, the location of residence in a village or city has a significant positive relationship which implies that the location of residence has an impact on poverty levels in Indonesia. Other findings show that health conditions, loan status, and type of consumption have no effect on poverty in Indonesia.

The behavior of household finances is the most important aspect in efforts to reduce poverty in Indonesia. Synergy between the government and financial institutions needs to be improved in order to increase public financial literacy and inclusion and as an effort to reduce financial vulnerability in poor households. The government has created the Indonesian Financial Literacy National Strategy 2021-2025 to increase the literacy level of Indonesian households. This optimal implementation is one of the government's efforts to improve the financial behavior of Indonesian households. Inclusive education can be a way out to lift themselves out of poverty. Thus, it requires changes in the value system of the importance of education, the importance of parental and state support to generate educational dynamism from within, and focus on improving the quality of education. The opening of wider job opportunities and the existence of training and education programs for workers in improving work skills can reduce the unemployment rate and can indirectly reduce the level of household poverty. In addition, a policy is needed to expand financial institutions to target poor households in providing capital for their business environment.

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