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Social Economic Analysis of Financial Inclusion and Poverty in Indonesia

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ABSTRACT: This article analyzes the impact of financial inclusion on poverty in Indonesia using data from the 2020 National Socioeconomic Survey (Susenas), with household heads as the sample. The study posits the hypothesis that financial inclusion significantly contributes to poverty reduction. The analytical method applied is the probit logit model, considering that the dependent variable is binary. The results indicate that financial inclusion has a negative and significant effect on poverty, with a probability of 0.000 at a 5% significance level. This suggests that increasing financial inclusion can reduce the risk of poverty by up to 8.2%. These findings underscore the importance of access to and use of financial services for households in the effort to alleviate poverty. Therefore, policies are needed to support the enhancement of financial inclusion through the expansion of access to financial services, improvement of financial literacy, adjustment of financial products and services, and cross-sector coordination among the government, private sector, and financial institutions.

KEYWORDS: Financial Inclusion, Poverty, Household Heads, Probit Logit.

INTRODUCTION

Poverty is one of the primary indicators in the globally established Sustainable Development Goals (SDGs). Many countries around the world continue to face the challenge of poverty, making "ending poverty and hunger" a fundamental objective in the sustainable development agenda that must be achieved by 2030 (United Nations, 2015).

The approach to understanding and addressing poverty has shifted from a unidimensional perspective to a multidimensional approach. Poverty is no longer viewed solely as a lack of income; it also encompasses various other dimensions, such as access to education, healthcare, clean water, sanitation, and social participation(Alkire & Foster, 2011; UNDP, 2019). As a result, understanding the causes of and solutions for poverty alleviation has become increasingly comprehensive, addressing multiple aspects of community life.

Poverty is a multidimensional concept with numerous definitions, but most definitions often relate it to economic aspects such as income, consumption, or asset ownership (World Bank, 2019). Efforts to define and identify poverty can essentially be simplified into two main perspectives.

From a measurement standpoint, poverty can be categorized into absolute poverty and relative poverty. Absolute poverty refers to an individual's inability to meet basic minimum needs, such as food, clothing, shelter, and healthcare (Ravallion, 1998). In contrast, relative poverty emphasizes an individual's or group's position below the standard of living accepted in society (Sen, 1983).

From a causative perspective, poverty can be classified into natural poverty and structural poverty. Natural poverty relates to limitations in natural resources, low quality of human resources, and geographical factors. Structural poverty, on the other hand, arises from factors beyond individual control, such as policies, institutional frameworks, and socio-economic systems that do not favor the poor (Chambers, 1983; Kanbur & Squire, 1999).

According to data from the Central Statistics Agency of Indonesia (BPS, 2024), the economic growth and poverty levels in Indonesia from 2020 to 2023 are illustrated in Figure 1.

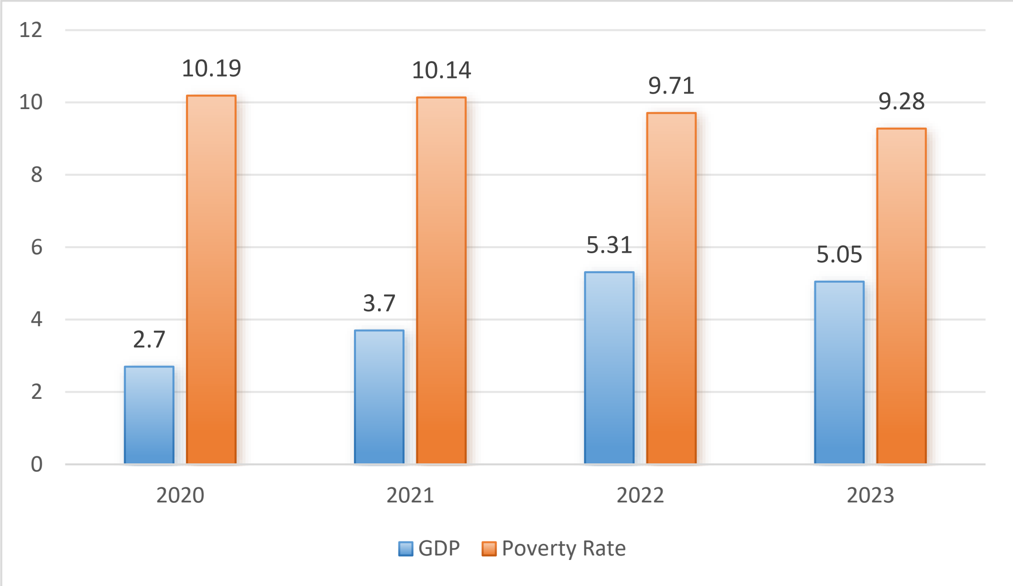

Figure 1. Economic Growth and Poverty Rate in Indonesia from 2020 to 2023 (%).
Source: *BPS,2024*

In Figure 1, it can be observed that the poverty rate in Indonesia has decreased from 2020 to 2023. In 2020, the poverty rate was 10.19%, representing approximately 27.55 million people. This figure continued to decline, reaching 9.28% or 25.48 million people by 2023. However, Indonesia's economic growth exhibited fluctuations during the same period. From 2020 to 2022, there was an increase, but in 2023, economic growth decreased from 5.31% in 2022 to 5.03% in 2023.

The decline in the poverty rate indicates efforts by the government and various stakeholders to reduce poverty in Indonesia through various social programs and policies. Nevertheless, there is still room to enhance poverty alleviation programs further to boost economic growth and reduce poverty rates more significantly.

Inclusive economic growth can enhance a country's economic competitiveness. Inclusive economic growth refers to economic development that provides fair access and opportunities for all members of society, improves well-being, and reduces inequality. Financial inclusion is a crucial factor in achieving inclusive economic growth. It can help equalize opportunities for all segments of society, thereby contributing to a reduction in poverty rates.

Easy access to financial services can enhance community well-being. This access helps individuals obtain inputs for production within the economy(Koomson et al., 2020). Based on the assumption that increased access to financial services leads to improved community welfare, financial inclusion has been widely accepted by economists as an important instrument for reducing poverty levels (Mohammed et al., 2017; Park & Mercado, 2015; Swamy, 2014).

The debate regarding the relationship between financial sector development and poverty levels in an economy has been a prominent topic in economic literature, analyzed from both macroeconomic and microeconomic perspectives. From a micro perspective, access to financial services is considered essential for poor households and micro-small enterprises to manage cash flows, invest, and enhance their productive capabilities. Therefore, financial inclusion at the individual and household level is expected to contribute directly to poverty reduction (Banerjee et al., 2015).

At the macro level, improved access and inclusion in formal financial services are believed to stimulate economic growth, ultimately leading to a reduction in poverty within a country or region. The broader and more equitable the access to financial products and services, the greater the potential for individuals and households to enhance productivity, manage risks, and seize economic opportunities, which in turn will improve well-being and reduce poverty. (Chibba, 2009).

As of 2019, Indonesia lagged behind in terms of financial inclusion compared to other Southeast Asian countries. The financial inclusion index for Indonesia was recorded at only 76 percent, significantly lower than neighboring countries such as Singapore at 98 percent, Thailand at 82 percent, and Malaysia at 81 percent (Bank Indonesia, 2020). This substantial gap in access to and usage of formal financial services indicates that efforts to enhance financial inclusion in Indonesia require greater attention and commitment compared to several countries in the ASEAN.

In 2019, Indonesia's financial inclusion index position was considerably low at 76 percent, which is far behind that of other ASEAN countries. Singapore had the highest financial inclusion index at 98 percent, followed by Thailand at 82 percent and Malaysia at 81 percent. This data demonstrates that access to financial services for poor and near-poor communities in Indonesia remains limited. Developing the financial sector will enhance financial inclusion (World Bank, 2019).

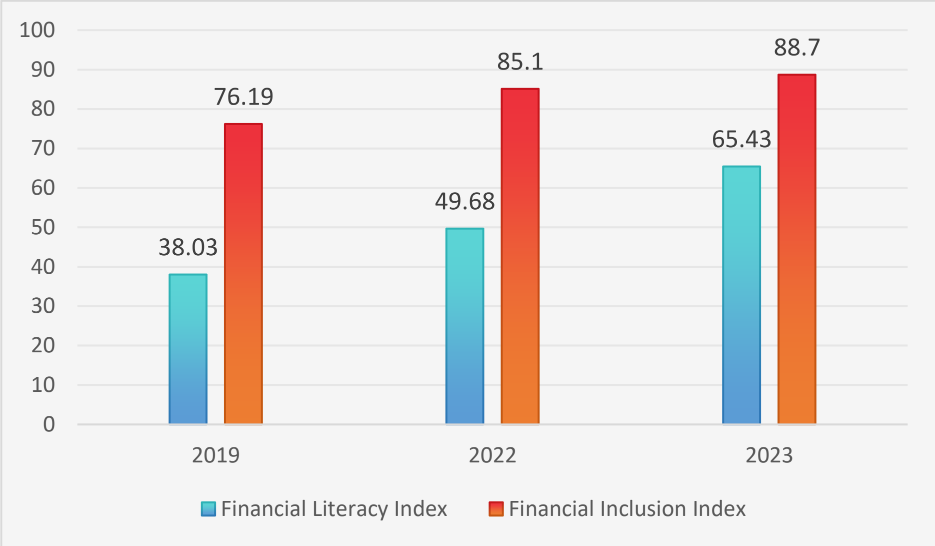

Figure 2. Financial Literacy Index and Financial Inclusion Index in Indonesia from 2019 to 2023 (%)

Source: *OJK,2024*

Figure 2. shows the results of the 2024 National Survey on Financial Literacy and Inclusion (SNLIK), indicating that the financial literacy index among the Indonesian population is 65.43%, an increase from 38.03% in 2019. Meanwhile, the financial inclusion index for this year has reached 88.70%, up from 76.19% in the previous SNLIK period in 2019. This reveals a continuing gap between the levels of financial literacy and financial inclusion.

Various empirical studies have demonstrated that increasing financial inclusion can enhance community welfare, both directly and indirectly (Koomson et al., 2020). Broader access to formal financial products and services enables individuals and households, including those with low incomes, to better manage risks, invest, and seize available economic opportunities. Consequently, the economic welfare improvements resulting from financial inclusion are expected to contribute to poverty alleviation efforts at the macro level (Demirgüç-Kunt & Klapper, 2012; Zins & Weill, 2016). Thus, promoting financial inclusion is a vital strategy in supporting poverty reduction programs in developing countries.

Based on the literature review conducted, the poverty level in a region is influenced by two main factors: financial inclusion and the socio-economic characteristics of households (Demirgüç-Kunt & Klapper, 2012; Zins & Weill, 2016). Financial inclusion plays a role in reducing poverty through two mechanisms, both direct and indirect. Directly, increased access to and use of formal financial services by poor households can enhance their ability to manage risks, invest, and take advantage of economic opportunities (Koomson et al., 2020). Indirectly, broader financial inclusion can also stimulate economic growth and the dynamics of economic activity, ultimately leading to a reduction in poverty levels at the macro level (Demirgüç-Kunt & Klapper, 2012). Therefore, efforts to promote financial inclusion have significant implications for poverty alleviation policies and programs. The objective of this study is to analyze the impact of financial inclusion on poverty levels in Indonesia.

RESEARCH METHODS

This study utilizes secondary data sourced from the National Socioeconomic Survey (SUSENAS) of 2020, employing a household-level data structure with a total of 335,544 household observations. The study constructs a financial inclusion index based on four main dimensions: ownership of financial products, use of financial products, access to credit, and receipt of remittances (Demirgüç-Kunt & Klapper, 2013; Allen et al., 2016). This multidimensional approach is chosen to capture various important aspects of financial inclusion that may affect welfare and poverty alleviation at the household level. The method for constructing the financial inclusion index in this study refers to frameworks that have been widely utilized in the literature on development economics and financial inclusion.

The study applies a binomial logistic regression model to analyze the determinants of poverty. The binomial logistic regression model is the most commonly used method in the analysis of binary or dichotomous response data (Hosmer & Lemeshow, 2000). In the context of this study, the dependent variable is dichotomous, where a value of 1 indicates a poor household and a value of 0 indicates a non-poor household. The choice of the binomial logistic regression model is based on the binary nature of the dependent variable, allowing the model to estimate the odds or probabilities of a household being in a poor or non-poor condition based on its socio-economic characteristics.

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Based on theory and literature review, a research framework has been developed. This conceptual framework aims to explain and determine the relationships between variables in accordance with the research problem formulation. In a continuously evolving era, financial inclusion is becoming increasingly important. Financial inclusion provides broader and more efficient financial support and facilitates access to financial services, thereby contributing to poverty reduction. The conceptual framework is illustrated as follows:

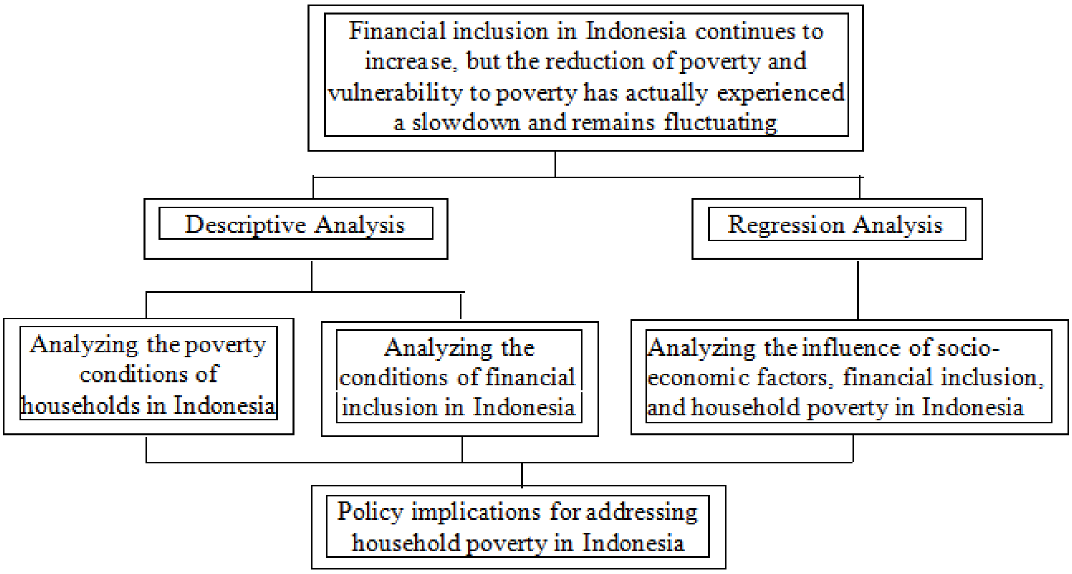

Figure 3. Conceptual Framework

The following are the operational definitions and measurements of the dependent and independent variables, as well as the operational definitions and measurements of the control variables in the study based on Susenas data 2020.

Table 1. Operational Definitions of Research Variables

Variables	Operational Definitions	Measurement
Dependent Variable		
POV	The poverty status of households measured using the poverty line established by the Central Statistics Agency	1 = Poor households 0 = others
Variabel Independen		
FI	Financial inclusion, formulated using the Financial Inclusion Index (FII)	Index
Age	Age of head of households	Years
Hhsz	Number of households	People
Female	Gender of head of households	1 = Female 0 = others
Rural	Residential rea of households	1 = Rural 0 = others
Edu	Education status of head of household	1 = High School Graduate 0 = others
Empstat	Employment status of head of household	1 = Working in formal sector 0 = others

Source: *Susenas Data, 2020*

Based on the conceptual framework, and the operational definitions and measurements of the dependent variable in dummy form, the regression model takes the probit logit form as follows.

$$P(POVi{=}1|Xi){=}\beta_0{+}\beta 1FIi{+}\beta 2Agei{+}\beta 3Hhszi + \beta 4Femalei{+}\beta 5Rurali{+} \beta 6Edui{+}\beta 7Empstati + \varepsilon i \quad (1)$$

Description :

$P(POVi{=}1\|Xi)$	= The probability of households being poor
FIi	= Financial inclusion
$Agei$	= Age of the household head
$Hhszi$	= Number of household members
$Femalei$	= Gender of the household head
$Rurali$	=Rural/Urban
$Edui$	= Education of the household head
$Empstati$	=Employment sector of the head of the household
β	=Regression coefficient
εi	= error term

RESULTS AND DISCUSSION

The data analysis conducted using STATA 17 indicates that the variables of financial inclusion, household head characteristics, and the characteristics of the residential area have a significant impact on household poverty in Indonesia. This can be observed from the probability values of each variable, which is 0.000 at a 5 percent significance level (see Appendix). These findings underscore the importance of understanding the factors influencing poverty within a broader context, as well as how policies can be designed to address this issue.

Regarding financial inclusion, the analysis shows that an increase in financial inclusion is associated with a potential reduction in poverty by 0.0820 or 8.20%. In other words, the greater the access households have to financial services, the lower the risk of poverty they face. This finding aligns with research conducted by Inoue (2019) and Li (2018), which states that financial inclusion, in terms of access to and use of banking services and credit, significantly contributes to the process of poverty reduction. This suggests that policies supporting financial inclusion can be an effective strategy in poverty alleviation efforts.

Financial inclusion is not only crucial for poor households but also has broader impacts on rural areas and other vulnerable groups. According to Nino-Zarazua and Copestake (2008), better access to financial services can improve the living conditions of households in difficult situations. Therefore, promoting financial inclusion can be a strategic step towards creating more equitable welfare in society.

Additionally, the characteristics of the household head and the residential area also play a role in determining the level of poverty. For instance, factors such as age, education, and the type of employment of the household head can influence economic stability and their ability to cope with financial challenges. Meanwhile, the conditions of the residential area, whether urban or rural, can affect access to economic opportunities and basic services. Thus, a comprehensive and integrated approach is necessary to effectively address poverty issues, taking into account all contributing variables.

POLICY IMPLICATIONS

a) Expansion of Financial Service Access

In addition to focusing on improving access to and the quality of education, another effort that can be made is to encourage the development of financial infrastructure in remote and rural areas. This can enhance the accessibility of banking services and financial institutions for poor communities. With better access to financial services, it is hoped that people in these areas can obtain more adequate financial support to improve their living standards. This initiative aligns with the government’s efforts to strengthen financial inclusion across Indonesia.

Moreover, in addition to promoting the development of financial infrastructure in remote and rural areas, another effort is to encourage the growth of affordable digital financial services for low-income communities. With better access to digital financial services, it is expected that people across all socioeconomic strata can receive the financial support they need to enhance their well-being. This initiative is consistent with the government's efforts to strengthen financial inclusion and ensure that all citizens can be served by an increasingly modern and accessible financial system.

b) Improvement of Financial Literacy

Another effort that can be made is to enhance financial education programs for poor communities. This aims to improve their understanding of the various financial products and services available. With better understanding, it is expected that low-income individuals can optimally utilize financial services to support their well-being. This initiative is an important part of the government's efforts to strengthen financial inclusion across all segments of society.

Additionally, another crucial effort is to ensure that financial information is readily available and easily accessible to the entire community. This will help improve transparency and financial literacy among the population. With better access to financial information, individuals can make more informed financial decisions that align with their needs. This initiative is a vital component of the government's comprehensive efforts to enhance financial inclusion across all layers of society.

c) Adjustment of Financial Products and Services

Efforts to enhance financial inclusion in Indonesia should not be limited to expanding access; they must also be accompanied by the development of financial products and services that meet the needs of poor communities. This can include microfinance schemes, savings accounts, and insurance specifically designed to address the financial needs of low-income populations. Additionally, ensuring that the costs of financial services remain affordable for poor households is a key factor. Through these initiatives, it is hoped that individuals across all socioeconomic strata can be integrated into and served by an increasingly inclusive financial system. This aligns with the national development agenda to reduce economic disparities and improve the welfare of the populace.

d) Cross-Sector Coordination

Efforts to enhance financial inclusion in Indonesia require close coordination among various stakeholders. The government, private sector, and financial institutions must collaborate to integrate poverty alleviation initiatives and financial inclusion efforts. This is crucial to ensure that financial inclusion policies operate synergistically and support other poverty alleviation programs. With effective collaboration, it is expected that financial services tailored to community needs can be accessible to all segments of society, including low-income households. This integrated approach will promote the overall and sustainable improvement of the welfare of the population.

CONCLUSION

Based on the research findings, it can be concluded that access to and use of financial services, or financial inclusion, by households has significant potential to reduce poverty levels in Indonesia. Therefore, it is essential to formulate and implement policies that can enhance this financial inclusion through various strategies, including expanding access to adequate financial services, improving financial literacy to help communities understand and optimally utilize financial products, and adjusting financial products and services to better meet the needs of low-income populations. Additionally, cross-sector coordination among the government, private sector, and financial institutions is crucial to create effective synergy in this effort. With integrated strategic measures, it is hoped that financial inclusion can significantly contribute to poverty alleviation and improve overall community welfare.

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ATTACHMENT

Logit Regression Results

```
Logistic regression                                     Number of obs =  335,544
                                                        LR chi2(7)    = 16787.73
                                                        Prob > chi2   =   0.0000
Log likelihood = -74560.556                             Pseudo R2     =   0.1012
```

pov	Coefficient	Std. err.	z	P>|z|	[95% conf.	interval]
IFI	-1.744819	.0574717	-30.36	0.000	-1.857462	-1.632177
age	-.0090564	.0005973	-15.16	0.000	-.0102272	-.0078857
Hhsz	.3853509	.0037084	103.91	0.000	.3780826	.3926191
female	.3733301	.0210159	17.76	0.000	.3321397	.4145205
rural	.4227393	.0162912	25.95	0.000	.3908092	.4546694
edu	-.746176	.0189475	-39.38	0.000	-.7833124	-.7090396
empstat	-.3498342	.0184171	-19.00	0.000	-.385931	-.3137374
_cons	-3.59373	.0386314	-93.03	0.000	-3.669446	-3.518013

Marginal Effect

```
Marginal effects after logit
      y  = Pr(pov) (predict)
         =  .04945794
```

variable	dy/dx	Std. err.	z	P>|z|	[95% C.I.]		X
IFI	-.0820272	.00266	-30.82	0.000	-.087244	-.076811	.177484
age	-.0004258	.00003	-15.23	0.000	-.000481	-.000371	49.1065
Hhsz	.0181161	.00017	104.03	0.000	.017775	.018457	3.76466
female*	.019746	.00125	15.85	0.000	.017305	.022187	.159121
rural*	.0193402	.00072	26.78	0.000	.017925	.020756	.585455
edu*	-.0321687	.00074	-43.60	0.000	-.033615	-.030723	.346575
empstat*	-.0155216	.00077	-20.16	0.000	-.01703	-.014013	.305239

(*) dy/dx is for discrete change of dummy variable from 0 to 1