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(REVIEW ARTICLE)

Financial inclusion and poverty alleviation: Does it work? (Studies in lower-middle-income countries)

Lia Nazliana Nasution [1, *], Wahyu Indah Sari [2] and Riska Khairuni [2]

[1] Master of Economics Study Program, Postgraduate School, Universitas Pembangunan Panca Budi, Medan, Indonesia.
[2] Development Economics Study Program, Faculty of Social Sciences, Universitas Pembangunan Panca Budi, Medan, Indonesia.

Abstract

A stable financial system can build a country's economy. Financial inclusion is one of the strategies undertaken to improve the economy and alleviate poverty. Poverty is a troubling problem for every country. Both developing and developed countries face poverty. Therefore, poverty must be eradicated immediately. This study analyzes financial inclusion in poverty alleviation in five lower-middle-income countries (Indonesia, Myanmar, Laos, Pakistan, and Bangladesh). The variables used in this study are the number of credit accounts, the number of savings accounts, the number of debits, the number of bank branch offices, and economic growth. This research uses secondary data or time series from 2010-2020. The method used in this study is the ARDL Panel method. The panel shows that countries with leading indicators for poverty alleviation are Indonesia, Myanmar, and Pakistan. Meanwhile, the leading indicators variables are the number of creditors, the amount of savings, and the number of debits in the five lower-middle-income countries.

Keywords: Growth; Financial inclusion; Poverty; Lower-Middle-Income Countries; Panel ARDL

1. Introduction

Creating a stable financial system is included in the country's success in developing its economy. Financial inclusion is access by the public to take advantage of the services or products of the financial institutions themselves. Later, these services help meet all the community's needs, such as payments, transactions, savings, or credit, that can be reached effectively and efficiently. Inclusive finance is a top priority in the development of the financial sector. The existence of financial inclusion is expected to increase the ownership of banking accounts for groups of people who have yet to be able to reach financial access (unbanked people), especially banking institutions.

The success of a country in building its economy by implementing a financial inclusion program in Indonesia was first implemented in 2010 through the Indonesia Savings movement program and the launch of TabunganKu. In July 2012 the government, through the Vice President and Bank Indonesia and the National Team for the Acceleration of Poverty Reduction, created a program related to the Financial Inclusion Strategy [1]. Financial inclusion is a program to include people who have yet to be reached by access to finance who will have the opportunity to have savings, transfers, and payments. It is also expected to improve the economy and reduce poverty [2]. Increasing financial inclusion is expected to reduce the number of unbanked people or those who do not have a bank account because they do not have access to essential banking services such as savings, which are fundamental rights for all people and have an essential role in improving people's lives. In addition to the basic need for savings, people with more capacity can also have other

* Corresponding author: Lia Nazliana Nasution

financial products and services such as insurance, financing, pension programs, and investments that can support a better standard of living.

According to the World Bank, financial inclusion is crucial in reducing poverty and increasing prosperity. Indonesia is fully committed to efforts to support growth in the level of financial inclusion in the country through Presidential Regulation Number 82 of 2016 concerning the National Strategic Financial Inclusion, which aims to expand public access to financial services to encourage economic growth, accelerate poverty reduction, reduce inequality between individuals and between regions in order to realize the welfare of the Indonesian people. *Poverty* is a problem all countries face with various backgrounds or causal factors. Poverty is not only a problem in developing countries but also in developed countries, which have a wealth of natural resources and human resources that are adequate and even abundant [3]. It has been proven in the Sustainable Development Goals (SDG) proclaimed by UN member states that the first proposed goal of the 17 goals is ending poverty in all its forms everywhere [4]. The World Bank [5] defines *poverty* as a lack of housing, low levels of health and education, lack of jobs, access to clean water and sanitation, powerlessness, and lack of representation and freedom.

The government is trying to reduce poverty. However, the number of poor people in Indonesia has not decreased significantly; even though the data in BPS shows a trend of decreasing the number of poor people, qualitatively, it has not shown a real impact of change; instead, the conditions are getting worse every year [6]. Factors that cause poverty are imperfect markets, underdevelopment, and insufficient capital, which will lead to low income for them in the future [7]. The low income earned will impact the low financial savings and existing investments. Poverty is the most severe in developing countries, and poverty can be seen as a collective condition of society.

In this study, researchers chose five countries in the Lower Middle-Income category from 15 lower-middle-income countries in Asia, namely Indonesia, Myanmar, Laos, Pakistan, and Bangladesh. In addition, five lower-income countries (Indonesia, Myanmar, Laos, Pakistan, and Bangladesh) joined the ASEAN Regional Forum (ARF). ARF is the only forum at the government level attended by all-powerful countries in the Asia Pacific region and other regions. ARF agreed that comprehensive security covers military and traditional security issues and relates to political, economic, social, and other issues, such as non-traditional security issues. The number of poor people in each country is different and quite fluctuates every year. The poverty data for the five lower-middle-income countries can be displayed in the following table and diagram.

Table 1 Ratio of Total Poor Population (% of Population) in Five Lower Middle Income Countries

Year	Indonesia	Myanmar	Lao PDR	Pakistan	Bangladesh
2010	13.3	42.2	18.3	36.8	31.5
2011	12.5	42.2	18.3	36.3	31.5
2012	12.0	42.2	18.3	36.3	31.5
2013	11.4	42.2	18.3	29.5	31.5
2014	11.3	42.2	18.3	29.5	31.5
2015	11.2	32.1	18.3	24.3	31.5
2016	10.9	32.1	18.3	24.3	24.3
2017	10.6	24.8	18.3	24.3	24.3
2018	9.8	24.8	18.3	21.9	24.3
2019	9.4	24.8	18.3	21.9	24.3
2020	9.8	24.8	18.3	21.9	24.3

Source: [8]

Based on the data in the table and graph above, it can be observed that the poverty rate in lower-middle-income countries has generally decreased. Indonesia, which had a poverty rate in 2010 of 13.3%, continues to show a decline in 2020 to 9.8%. Myanmar has also experienced a significant reduction in the poverty rate, where in 2010 it was 42.2%, decreasing to 24.8% in 2020. Laos reported a static poverty rate from 2010 to 2020, namely 18.3%. Furthermore,

Pakistan has also experienced a reduction in the poverty rate, namely by 36.8% in 2010 to 21.9% in 2020. Bangladesh has also shown a decrease in the poverty rate, which 2010 was 31.5% to 2020 by 24.3%.

Poverty is a social phenomenon in society that must be eliminated. Efforts to eradicate poverty are known as poverty alleviation. Poverty alleviation is a set of actions, both economic and humanitarian, that are intended to lift people out of poverty permanently. Poverty alleviation can be done with various efforts or specific strategies, one of which is the financial inclusion strategy or financial inclusion. The World Bank (2014) defines financial inclusion as the proportion of individuals and companies using financial services with many dimensions that reflect the full range of financial service possibilities, from payments and savings accounts to credit, insurance, pensions, and securities markets. Meanwhile, according to [9], financial inclusion is the right of everyone to have access to complete services from financial institutions in a timely, convenient, informative, and affordable manner, with full respect for their dignity.

Financial inclusion has become a vital agenda both on a national scale in Indonesia and in other countries at the international level. At the national level, the Indonesian government's commitment to financial inclusion was conveyed directly by the President of the Republic of Indonesia in the Chairman's Statement at the 2011 ASEAN Summit forum to have a National Strategy for Inclusive Finance. Meanwhile, at the international level, financial inclusion has been discussed in various forums, including the Group of Twenty (G20), Organization of Economic Cooperation and Development (OECD), Alliance for Financial Inclusion (AFI), Global Policy Forum (GPF), Asia-Pacific Economic Cooperation (APEC) and the Association of Southeast Asian Nations (ASEAN) in which Indonesia actively participates [9]. Based on the background description above, we prepared this research intending to look at the impact of financial inclusion on poverty alleviation in lower-middle-income countries, namely Indonesia, Myanmar, Laos, Pakistan, and Bangladesh.

2. Literature Review

2.1. Financial Inclusion

Financial inclusion is a process that ensures easy access, availability, and use of the formal financial system for all members of the economy [10]. The World Bank (2014) defines financial inclusion as the proportion of individuals and companies using financial services with many dimensions that reflect the full range of financial service possibilities, from payments and savings accounts to credit, insurance, pensions, and securities markets. It can be defined differently for individuals and companies.

Cheng & Degryes (2006) stated that accessing banking services by using banking services are two different things. Economic actors may have access to financial services but do not wish to use them. It can be for socio-cultural reasons or costs incurred from financial services. Therefore Cheng & and Degryes differentiate between these two things. In the first concept, he said that the number of banking service offices and ATMs measures access to and the possibility of using financial services in an area. The higher the intensity of banking service offices ATMs, the higher the opportunity to access and use financial services. The second concept is measured by the number of credit and deposit accounts or, in this case, third-party funds (DPK). The large amount of third-party funds indicates that the use of financial services is high.

Furthermore, in [11] concerning the National Strategy for Financial Inclusion (SNKI), it is stated that inclusive finance is a condition when every member of the public has access to various quality formal financial services in a timely, smooth, and safe manner at affordable costs—accordance with the needs and capabilities in order to improve the welfare of society. The National Strategy for Inclusive Finance (SNKI) contained in Presidential Regulation Number 82 of 2016 states that inclusive finance is an essential component in the process of social inclusion and economic inclusion, which plays a role in driving economic growth, creating financial system stability, supporting poverty alleviation programs, and reducing inequality. Between individuals and between regions. An inclusive financial system is realized through public access to financial services to increase economic capacity and ultimately pave the way out of poverty and reduce economic disparities. [12] then synthesizes several studies that examine the impact of financial inclusion on development, which notes the positive impact of financial inclusion on poverty reduction.

The implementation of inclusive finance is generally gradual, starting with clear targets, such as through recipients of government social program assistance or migrant workers (TKI), before slowly being able to be used by the general public. According to [13], several indicators used in financial inclusion are divided into three types of dimensions, namely:

- Banking Penetration. Banking penetration is the first indicator of financial inclusion, which explains the extent to which the banking system has a broad reach of the public or Population accessing banks, such as the proportion of DPK and bank account ownership.
- Availability of financial services. This indicator measures how far banking institutions are available to the general public. The number of bank outlets, ATMs, etc., can indicate the Availability of services. The number of banking outlets or ATMs can indicate the Availability of banking services.
- Use of banking services. Indicators describe how much the public can use banking products and services in their economic activities and can describe the behavior of people's financial management through banking products in everyday life.

2.2. Financial inclusion and poverty

Poverty is one of the problems that must be overcome and is one of the indicators of the success of national development. One of the factors that influence the level of poverty is financial inclusion. Residents trapped in a vicious circle of poverty will find it difficult to escape. In connection with Nurske, it was stated that "a country will continue to be poor because the country is a poor country." The cause of the vicious cycle of poverty is due to solid obstacles in the process of capital formation [14]. To get out of this circle, financial inclusion can be one of the determinants. It is due to the provision of access to financial services that are good and easy for the community to reach so that it has the potential to lift people out of the cycle of poverty. The ease of access to financial services will create a culture of saving thrift and generate an efficient and low-cost payment mechanism [15] [16]. Financial inclusion will impact patterns of consumption, investment, and education in these communities and ultimately increase income for the poor to get out of the cycle of poverty.

Based on research [17], financial inclusion hurts reducing poverty in Indonesia. Because the public needs to optimally utilize it to use formal financial services as the primary source of financing. Communities tend to use informal financial services rather than formal banking facilities due to obstacles in the form of branch offices that cannot be reached due to their remote location and physical and psychological constraints, thus indicating that the financial market in Indonesia needs to be fixed. That is, if financial inclusion increases, more and more people can carry out productive economic activities, followed by a reduction in poverty.

2.3. Number of Creditor Accounts and Poverty

The results of research conducted by [18] show that the number of creditor accounts negatively and significantly affected the number of poor people in Indonesia in 2012-2017 with a correlation coefficient of -0.993. It can be interpreted that if the variable number of creditor accounts increases by 1 percent, it will reduce the number of poor people by 0.993 percent. That is, if the number of creditor accounts in lower-middle-income countries is higher, then the poverty rate in that country will decrease. Furthermore, vice versa, if the number of creditor accounts in lower-middle-income countries is lower, then the poverty rate in that country will increase.

2.4. Number of Savings Accounts and Poverty

The results of research conducted by [19] regarding financial inclusion as a catalyst for poverty alleviation in Nigeria in 1992-2016 show that the number of customers who have bank accounts/deposit accounts has a positive and significant relationship to people's per capita income with a regression coefficient of 0.236. It can be interpreted that if the number of customers with bank accounts/deposit accounts increases by 1 percent, it will increase the community's per capita income by 0.236 percent so that it can simultaneously reduce the poverty rate in the community.

[20] on her research shows that the number of savings/deposit accounts positively and significantly affected per capita income in ASEAN member countries in 2011-2017. Per capita income is closely related to poverty, where if per capita income increases, the poverty rate will decrease. That is, if the number of savings accounts in lower-middle-income countries is higher, then the poverty rate in that country will decrease. Moreover, vice versa, if the number of savings accounts in lower-middle-income countries is lower, then the poverty rate in that country will increase.

2.5. Debt Amount with Poverty

Based on the results of research conducted by [21] in the results of the research he has conducted, the amount of deposits/savings had a negative and significant effect on poverty in countries in the Sub-Saharan Africa region in 1980-2017 with a regression coefficient of -3.250. It can be interpreted that if the variable amount of deposits/savings (savings) increases by 1 percent, it will reduce the poverty rate by 3.250 percent.

That is, if the amount of debt in a lower middle-income country is higher, then the poverty rate in that country will decrease. Furthermore, vice versa, if the amount of debt available in lower-middle-income countries is lower, then the poverty rate in that country will increase.

2.6. Number of Bank Branch Offices and Poverty

The results of research conducted by oleh [22] show that the number of bank service offices per 1,000 km2 had a negative and significant effect on poverty in 33 provinces in Indonesia in 2014-2018 with a regression coefficient of -1.043. It can be interpreted that if the variable number of bank service offices increases by 1 percent, it will reduce the poverty rate by 1.043 percent. That is, if the number of bank branch offices available in lower-middle-income countries is higher, then the poverty rate in that country will decrease. Furthermore, if the number of bank branch offices available in lower-middle-income countries is lower, then the poverty rate in that country will increase.

3. Research Methodology

3.1. Data

The data to be used in this study is secondary data originating from the World Bank from 2010 to 2020.

3.2. Data Analysis Technique

Autoregressive Distributed Lag (ARDL) was introduced by [23]. This technique examines each variable lag at I(1) or I(0). On the other hand, the ARDL regression result is a test statistic that can compare two asymptotic critical values.

The Autoregressive Distributed Lag (ARDL) equation/formula used in this study is as follows:

$$KMKS_{it} = \alpha + \beta_1 JRKR_t + \beta_2 JTAB_t + \beta_3 JDBT_t + \beta_4 JKCB_t + \beta_5 PDB_t + \varepsilon$$

While the Autoregressive Distributed Lag (ARDL) equation by country is as follows:

$$KMKS_{INDONESIAt} = \alpha + \beta_1 JRKR_t + \beta_2 JTAB_t + \beta_3 JDBT_t + \beta_4 JKCB_t + \beta_5 PDB_t + \varepsilon$$

$$KMKS_{MYANMARt} = \alpha + \beta_1 JRKR_t + \beta_2 JTAB_t + \beta_3 JDBT_t + \beta_4 JKCB_t + \beta_5 PDB_t + \varepsilon$$

$$KMKS_{LAOSt} = \alpha + \beta_1 JRKR_t + \beta_2 JTAB_t + \beta_3 JDBT_t + \beta_4 JKCB_t + \beta_5 PDB_t + \varepsilon$$

$$KMKS_{PAKISTANt} = \alpha + \beta_1 JRKR_t + \beta_2 JTAB_t + \beta_3 JDBT_t + \beta_4 JKCB_t + \beta_5 PDB_t + \varepsilon$$

$$KMKS_{BANGLADESHt} = \alpha + \beta_1 JRKR_t + \beta_2 JTAB_t + \beta_3 JDBT_t + \beta_4 JKCB_t + \beta_5 PDB_t + \varepsilon$$

Information:
KMKS = Poverty
JRKR = Number of credit accounts
JTAB = Number of savings accounts
JDBT = total debit
JKCB = Number of bank branch offices
GDP = gross domestic product
α = Constant
β = Regression coefficient
ε = Regression error
i = Number of observations (5 countries)
t = Amount of time (11 years)

4. Results and discussion

Panel analysis with Auto Regressive Distribution Lag (ARDL) tests pooled data, which is a combination of cross-section (country) data with time series data (annual). The results of the ARDL panel are better than ordinary panels because they are capable of long-term cointegration and have the widest distribution of lags. Following the theory, by using the Eviews 10 software, the following results are obtained:

Table 2 ARDL Panel Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
Long Run Equation				
JRKR	0.002519	0.000935	2.694614	0.0166
JTAB	-0.049781	0.011344	-4.388326	0.0005
JDBT	0.055916	0.015411	3.628204	0.0025
JKCB	-0.138828	0.023074	-6.016539	0.0000
LN_PDB	0.847917	0.331307	2.559307	0.0218
Short Run Equation				
COINTEQ01	-0.491231	0.232821	-2.109909	0.0521
D(JRKR)	-0.000665	0.006129	-0.108477	0.9151
D(JTAB)	0.075936	0.063529	1.195294	0.2505
D(JDBT)	-0.036157	0.019650	-1.840039	0.0356
D(JKCB)	0.682804	1.022566	0.667736	0.5144
D(LN_PDB)	-2.862829	2.046289	-1.399035	0.1821
C	-10.58649	5.295508	-1.999145	0.0640

Source: Eviews 10.0

The accepted ARDL Panel Model is a model that has cointegrated lag where the central assumption is that the coefficient value has a negative slope with a level of 5% requirements. Based on the acceptance of the model, the ARDL panel used in this study was rejected, and then data analysis can be continued with country-by-country panels.

4.1. Indonesia Country Panel Analysis

The following are the results of ARDL panel data processing for Indonesia with the help of the Eviews 10 program:

Table 3 ARDL Panel Results for Indonesia

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.083005	0.000987	-84.07514	0.0000
D(JRKR)	-0.000126	3.64E-09	-34529.70	0.0000
D(JTAB)	0.001935	1.07E-06	1810.005	0.0000
D(JDBT)	-0.003268	8.63E-06	-378.7794	0.0000
D(JKCB)	-0.000724	1.13E-05	-64.31943	0.0000
D(LN_PDB)	-0.046844	0.003702	-12.65219	0.0011
C	-1.738107	0.670212	-2.593368	0.0808

Source: Eviews 10.0

ARDL panel test results show:

- JRKR has a negative (-0.00) and significant impact on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JTAB has a positive (0.00) and significant effect on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JDBT has a negative (-0.00) and significant effect on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JKCB has a negative (-0.00) and significant effect on poverty, as indicated by a sig 0.00 <0.05 probability value.

- GDP has a negative (-0.04) and significant impact on poverty, as indicated by the probability value sig 0.00 <0.05.

4.2. Myanmar Country Panel Analysis

The following are the results of ARDL panel data processing for the country of Myanmar with the help of the Eviews 10 program:

Table 4 ARDL Panel Results for Myanmar

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.663367	0.012969	-51.14848	0.0000
D(JRKR)	-0.023949	0.000298	-80.43379	0.0000
D(JTAB)	-0.032894	0.000141	-232.6146	0.0000
D(JDBT)	-0.091445	0.000118	-777.5937	0.0000
D(JKCB)	0.065594	0.007035	9.324610	0.0026
D(LN_PDB)	-4.271532	0.679843	-6.283120	0.0081
C	-12.41222	16.25715	-0.763493	0.5007

Source: Eviews 10.0

The panel test results show:

- JRKR has a negative (-0.02) and significant effect on poverty, as indicated by a sig 0.00 > 0.05 probability value.
- JTAB has a negative (-0.03) and significant impact on poverty, as indicated by a probability value of sig 0.00 <0.05.
- JDBT has a negative (-0.09) and significant effect on poverty, indicated by the probability value sig 0.00 <0.05.
- JKCB has a positive (0.06) and significant impact on poverty, as indicated by a sig 0.00 <0.05 probability value.
- GDP has a negative (-4.27) and significant effect on poverty, indicated by the probability value of sig 0.00 <0.05.

4.3. Laos Country Panel Analysis

Following are the results of ARDL panel data processing for Laos with the help of the Eviews 10 program:

Table 5 ARDL Panel Results for Laos

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	0.112202	0.008114	13.82818	0.0008
D(JRKR)	0.008309	2.70E-05	308.3205	0.0000
D(JTAB)	0.322963	0.101272	3.189072	0.0497
D(JDBT)	0.006567	3.29E-05	199.4723	0.0000
D(JKCB)	-0.786290	0.221042	-3.557201	0.0379
D(LN_PDB)	0.273617	0.125570	2.179005	0.1175
C	1.926509	2.444706	0.788033	0.4882

Source: Eviews 10.0

The panel test results show:

- JRKR has a positive (-0.00) and significant impact on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JTAB has a positive (0.32) and significant effect on poverty, as indicated by a sig 0.04 <0.05 probability value.
- JDBT has a positive (0.00) and significant impact on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JKCB has a negative (-0.78) and significant effect on poverty, as indicated by a sig 0.03 <0.05 probability value.

- GDP has a positive effect (0.27) and is not significant on poverty as indicated by a probability value of sig 0.11 <0.05.

4.4. Pakistan Country Panel Analysis

Following are the results of ARDL panel data processing for Pakistan with the help of the Eviews 10 program:

Table 6 ARDL Panel Results for Pakistan

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-0.618329	0.022710	-27.22684	0.0001
D(JRKR)	0.002134	8.76E-05	24.35831	0.0002
D(JTAB)	0.031259	1.98E-05	1574.991	0.0000
D(JDBT)	-0.018460	8.52E-05	-216.6455	0.0000
D(JKCB)	-0.584680	0.008881	-65.83545	0.0000
D(LN_PDB)	0.045641	0.011481	3.975236	0.0285
C	-12.23566	7.739364	-1.580965	0.2120

Source: Eviews 10.0

The panel test results show:

- JRKR has a positive (0.00) and significant impact on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JTAB has a positive (0.03) and significant effect on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JDBT has a negative (-0.01) and significant impact on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JKCB has a negative (-0.58) and significant effect on poverty, as indicated by a probability value of sig 0.00 <0.05.
- GDP has a positive (0.04) and significant impact on poverty, as indicated by a sig 0.02 <0.05 probability value.

4.5. Bangladesh Country Panel Analysis

Following are the results of ARDL panel data processing for Bangladesh with the help of the Eviews 10 program:

Table 7 ARDL Panel Results for Bangladesh

Variable	Coefficient	Std. Error	t-Statistic	Prob. *
COINTEQ01	-1.203654	0.768330	-1.566584	0.2152
D(JRKR)	0.010308	9.13E-07	11288.81	0.0000
D(JTAB)	0.056418	0.000507	111.2378	0.0000
D(JDBT)	-0.074180	0.000842	-88.11639	0.0000
D(JKCB)	4.720120	1.828701	2.581132	0.0817
D(LN_PDB)	-10.31503	8.510586	-1.212023	0.3123
C	-28.47297	88.05219	-0.323365	0.7676

Source: Eviews 10.0

The panel test results show:

- JRKR has a positive (0.01) and significant impact on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JTAB has a positive (0.05) and significant effect on poverty, as indicated by a sig 0.00 <0.05 probability value.
- JDBT has a negative (-0.07) and significant impact on poverty, as indicated by a probability value of sig 0.00 <0.05.

- JKCB has a positive (4.72) and insignificant effect on poverty, as indicated by a sig 0.08 > 0.05 probability value.
- GDP has a negative (-10.31) and insignificant effect on poverty as indicated by the probability value sig 0.31 > 0.05.

The most appropriate analysis for testing pooled data is a combination of cross-section (country) data with time series data (annual), which is an analysis using a panel model with Auto Regressive Distribution Lag (ARDL). In addition, using the ARDL Panel also provides findings with a time lag, both in the short and long term. The ARDL panel test results can be summarized in the following table:

Table 8 ARDL Panel Summary

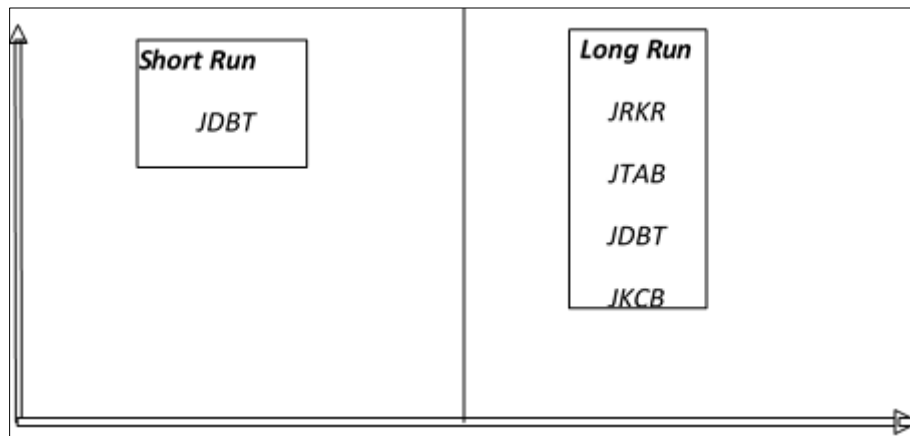| Variabel	Indonesia	Myanmar	Laos	Pakistan	Bangladesh	Short Run	Long Run
JRKR	1	1	1	1	1	0	1
JTAB	1	1	1	1	1	0	1
JDBT	1	1	1	1	1	1	1
JKCB	1	1	1	1	0	0	1
PDB	1	1	0	1	0	0	1

Figure 1 Analysis of Poverty Alleviation Period in Five Lower Middle-Income Countries

The following is a long-term summary of five lower-middle-income countries:

- Leading Indicator Optimization in Five Lower Middle-Income Countries
- Leading indicators of financial inclusion in poverty alleviation in Indonesia are variables (JRKR, JTAB, JDBT, JCCB, PDB)
- Leading indicators of financial inclusion in poverty alleviation in Myanmar are variables (JRKR, JTAB, JDBT, JKCB, PDB)
- Leading indicators of financial inclusion in poverty alleviation in Laos are variables (JRKR, JTAB, JDBT, JCCB)
- Leading indicators of financial inclusion in poverty alleviation in Pakistan are variables (JRKR, JTAB, JDBT, JCCB, PDB)
- Leading indicators of financial inclusion in poverty alleviation in Bangladesh are variables (JRKR, JTAB, JDBT)

The results of research conducted by [18] show that the number of creditor accounts had a negative and significant effect on the number of poor people in Indonesia in 2012-2017, with a correlation coefficient of -0.993. Research [20] in the research he has conducted it shows that the number of savings/deposit accounts had a positive and significant effect on per capita income in ASEAN member countries in 2011-2017. Per capita income is closely related to poverty, where if per capita income increases, the poverty rate will decrease.

The results of research conducted by [21] in the research that has been carried out show that the amount of deposits/savings has a negative and significant effect on poverty. That is, if the amount of debt in a lower middle-income

country is higher, then the poverty rate in that country will decrease. Furthermore, vice versa, if the amount of debt available in lower-middle-income countries is lower, then the poverty rate in that country will increase.

In panel terms, JRKR, JTAB, and JDBT became leading indicators of financial inclusion in poverty alleviation in five lower-middle-income countries. Financial inclusion as the proportion of individuals and companies using financial services has many dimensions reflecting the full range of financial service possibilities, from payments and savings accounts to credit, insurance, pensions, and securities markets. Financial inclusion has become a vital agenda both on a national scale in Indonesia and in other countries at the international level. [24] state that banking penetration has no significant effect on poverty. The poor face two obstacles: financial constraints and non-financial constraints. Non-financial constraints are in the form of the distance from the residence to the bank office. Financial constraints include fees charged by banks to customers, such as account opening fees, administration fees, transfer fees, credit fees, and account closing fees. These costs can then reduce the funds that should be used to meet the needs of people experiencing poverty.

Countries capable of becoming Leading indicators of poverty alleviation are Indonesia, Myanmar, and Pakistan, with the variables number of creditor accounts, total savings, and total debits having a positive and significant effect on poverty alleviation. In contrast to research [25], the debit amount variable negatively and significantly affects poverty alleviation. The variable availability of banking services positively and significantly affects poverty. Using financial services can increase low-income people's productive assets and productivity. Increased productive assets and productivity can help reduce the number of poor people.

5. Conclusion and Recommendations

Based on the analysis and discussion that has been carried out using the ARDL Panel method, it can be concluded that: The five lower-middle-income countries, Indonesia, Myanmar, and Pakistan can become leading indicators of poverty alleviation. In panel terms, Total Creditor Accounts, Total Savings, and Total Debts can become leading financial inclusion indicators for poverty alleviation in five lower-middle-income countries (Indonesia, Myanmar, Laos, Pakistan, and Bangladesh).

Based on the conclusions obtained, We recommend that the Indonesian government and the Bangladesh government create bank branch offices close to rural areas so that people in rural areas can easily access financial services and save their funds or save without any reason due to the absence of an available banking office. We also recommend that the Myanmar, Laos, and Pakistan governments increase the number of debit card transactions. In addition to making transactions more straightforward for people to use debit cards, it can also increase economic growth.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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