Financial Inclusion among the Hard Core Poverty Households: Evidence from Hard Core Poverty Eradication Program (BMT) in Perlis

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Abstract

The aim of this study was to evaluate the extent of financial inclusion initiatives among 315 participants in the Hard Core Poverty Eradication Program (BMT) in the state of Perlis. The data was analyzed using descriptive statistics via the Statistical Package for the Social Sciences (SPSS) and a multidimensional index approach to compute the financial inclusion index. In this study, financial inclusion was measured using the Index of Financial Inclusion (IFI), based on two dimensions, take-up rate and responsible usage. The take-up rate dimension was assessed by examining respondents who held savings accounts, investment accounts (such as Amanah Saham Bumiputra or ASB), education savings plan accounts (SSPN), housing loans, vehicle loans, personal loans, and life insurance/takaful policies. The responsible usage dimension was evaluated by the proportion of respondents with active deposit or investment accounts and those with performing financing accounts. The IFI is a multi-dimensional index that combines various aspects of financial inclusion into a single value ranging from 0 to 1, where 0 represents complete financial exclusion and 1 indicates full financial inclusion in an economy. The findings revealed that households in hard-core poverty had low levels of financial inclusion, with limited access to financial products. These households were classified as "underbanked" or "marginally banked."

Keywords: Financial inclusion, hard core poverty, economic growth, condition inclusion, access exclusion

1.0 Introduction

Financial inclusion, financial literacy and consumer protection are the three major pillars of financial stability (Chakrabarty, 2012). Financial inclusion operates from the supply side, offering financial markets and services that meet people's demands. It often faces challenges related to the financial markets, the network of banks and other financial institutions, and the effective design of products and services. In contrast, financial literacy drives the demand side by increasing awareness among people of the financial products and services available to them. Regardless of a country's status, whether developing or developed, both encounter similar demand-side challenges in financial inclusion, such as a lack of understanding of financial products and services and limited credit absorption capacity. A key issue in financial inclusion is promoting equity and inclusive growth. Inclusive financial systems provide widespread

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access to financial services without imposing price or non-price barriers, ultimately benefiting low-income individuals and other vulnerable groups. The results so far have shown there is a gap between the low-income segment and the general population in financial inclusion issue (Abd. Rahman, 2013). Without inclusive financial systems, poor people will only rely on their own limited savings to invest in their education or for entrepreneurial activities. This can contribute to persistent income inequality and slower economic growth. Even tough poverty has long been a global issue, the governments implemented various measures to revive the economy and provide relief to these vulnerable groups.

In Malaysia, the lower-income group, known as the B40, is considered a vulnerable segment and includes households classified as poor or extremely poor. To combat extreme poverty, the Malaysian government launched the Eradication of Extreme Poverty Program for Malaysian Families (BMTKM) under the 12th Malaysia Plan (12MP) in 2022. BMTKM aims to eradicate extreme poverty among heads of households (KIR) and their family members (AIR) by the end of 2025. The program focuses on empowering the poor to attain sustainable income levels. Additionally, it offers comprehensive support, including impart the financial management aspects.

Effective financial management is crucial for supporting Malaysia's goal of becoming a progressive, high-income nation. To advance this aspiration, it is essential to develop an inclusive financial system that serves all segments of society, including the underserved. Achieving this requires ensuring that every individual has access to high-quality and affordable essential financial services, including credit, banking, and insurance. Without access to these services, individuals, particularly those in poverty, may be unable to seize valuable investment opportunities or improve their financial security. Thus, enhancing financial inclusion is essential for fostering wider economic participation and promoting growth. In recent years, financial inclusion has gained significant attention in Malaysia, as policymakers recognize that institutionalized financial services are a key driver of economic growth. Although Malaysia is generally on a path to sustainable growth, the bottom 40% of the population remains classified as low-income households and according to reports indicate that the poorest 40% of people in developing nations often lack formal bank accounts and it indicates that a large portion of the population will be unable to benefit if they are not financially included.

To assess financial inclusion, the Global Findex Database provides indicators that evaluate how adults save, borrow, make payments, and manage risk. It highlights how a well-functioning financial system fulfills the crucial role of offering savings, credit, payment, and risk management products to individuals with diverse needs. In the absence of such inclusive systems, impoverished individuals must rely on their limited savings for education or entrepreneurial activities which can lead to persistent income inequality and slower economic growth.

2.0 Literature Review

Several definitions of financial inclusion are discussed in existing literature. According to Ozili (2018, 2021), financial inclusion is defined as the provision of and access to financial services for all members of the population, particularly the poor and other excluded groups. Dev (2006) defines financial inclusion as the delivery of banking services at an affordable cost to disadvantaged and low-income groups. Additionally, Sahay et al. (2015) describe financial inclusion as the use of and access to formal financial services. Overall, these definitions share

a common emphasis, the importance of ensuring that every member of the population has access to available financial services.

Financial inclusion has become a major policy objective for many developing and emerging countries, with the promise of integrating excluded populations into the formal financial sector and providing them with access to formal financial products and services (Allen et al., 2016). Governments are making significant efforts to achieve high levels of financial inclusion for the benefit of their citizens. Success stories in financial inclusion can be observed worldwide, including notable examples in India (Nimbrayan et al., 2018), Rwanda (Otioma et al., 2019), and Kenya (Hove and Dubus, 2019.

Previous study in financial inclusions included the issue of developing and computing the best An index of financial inclusion (IFI). A study by Chattopadhyay (2011) has developed IFI by using data on three dimensions of financial inclusion, namely banking penetration, availability of banking services and usage. The main reasons for this study selecting these dimensions are data availability and recent development in the literature. Prior to this study, Sarma (2008) has developed and computed IFI at two levels. The 1st level was by considering three basic dimensions of an inclusive financial system which were banking penetration (BP), availability of the banking services (BS) and usage of the banking system (BU). However the data saiz became smaller. Due to data limitation, Sarma (2008) has dropped one of the dimensions and proceed by using only 2 dimensions (availability and usage) and have data for a bigger set of 100 countries.

According to World Bank. (2020), Malaysia has been highly successful in attaining "financial inclusion," which represents an individual's access to and use of formal financial services. Malaysia also scores favorably on several metrics of financial inclusion in comparison to regional and global peer groups such as have an account, wages paid into account, wages paid into account or card among wage earners, saved at a financial institution, have a credit card, have a debit card, used a debit or credit card, and borrowed from a financial institution.

Besides the dimensions and indicators used for developing and computing the IFI, the range or categories of IF also varies from one study to another study. Sarma (2008) and Chattopadhyay (2011), has used the following categories/ range of IFI.

(i) $0.5 < IFI \leq 1$ – high financial inclusion
(ii) $0.3 \leq IFI < 0.5$ – medium financial inclusion
(iii) $0 \leq IFI < 0.3$ – low financial inclusion

However, in Malaysian context, IFI have been divided into 4 categories/range as follows:

(i) $0.75 < IFI \leq 1$ – high financial inclusion
(ii) $0.5 \leq IFI < 0.75$ – Above average financial inclusion
(iii) $0.25 \leq IFI < 0.5$ – Moderate financial inclusion
(iv) $0 \leq IFI < 0.25$ – Low financial inclusion.

Despite progress in financial inclusion, financial exclusion remains a significant issue, particularly for the most vulnerable populations. Vulnerable groups are those who lack the financial capacity, necessary documentation, or opportunities including economic, physiological, psychological, or cultural opportunities too access financial services. While the groups at risk of financial exclusion include the over indebted, homeless, unemployed, women,

elderly, migrants, and prison inmates. Research on financial inclusion in many developing countries has highlighted substantial disparities in access to formal financial products between wealthy and disadvantaged groups, as well as between urban and suburban populations, and between men and women. Reports indicate that the poorest 40% of people in developing nations often lack formal bank accounts. This finding was inline with Abd Rahman (2013). In the study, she found that, the IFI for low income group was slightly lower compared to general population in Malaysia. As nearly all countries aim for comprehensive integration of inclusive financial security and economic development by 2030, it is crucial to address and narrow the growing gap between the rich and poor. Hence, it is a necessary to have a framework for financial inclusion which can cater various aspects of demand and supply side issue. Koomson, et (2020), conduct a study which examined the effect of financial inclusion on poverty and vulnerability to poverty of Ghanaian households and found that an increase in financial inclusion has two effects on household poverty. First, it is associated with a decline in a household's likelihood of being poor and second, it prevents a household's exposure to future poverty.

3.0 Financial inclusion among hardcore poor Malaysia

Malaysia particularly has taken financial inclusion seriously, since financial inclusion acts as an engine to contribute to balanced and sustainable economic growth and development. Therefore, BNM has developed an index of financial inclusion (IFI) to measure the effectiveness of formal financial institutions in delivering financial products and services to all members of society (Seman,.et al, 2021). Using the 'core set' of indicators formulated by the AFI financial inclusion data working group (FIDWG), BNM constructed the financial inclusion key performance indicators by defining four dimensions of financial inclusion for Malaysia namely convenient accessibility, take-up rate, responsible usage and satisfaction level (Abd Rahman, 2013) The index rates of the level of financial inclusion, measuring the extent to which the general population has access to financial services by examining access and usage of formal financial intermediaries as well as the quality of financial services. The strengths and weaknesses of each dimension could also be analysed through the sub-indexes underlying the overall IFI.

The following table 1 captured the dimensions and indicators of the IFI dimensions.

Table 1: Defining the indicators of IFI

IFI dimensions	Indicators of each dimensions	
Convenient accessibility	1. % of mukim with >2,000 people with at least one access point. 2• % of population with at least one access point	In an inclusive financial system, financial services should be easily accessible to all potential users. To measure accessibility, is by looking at the number of access points within a given area, such as bank branches, ATMs, or banking agents (BAs). These access points are defined as facilities that enable both cash deposits and withdrawals

Take-up rate of financial product	1. % of adults with deposit accounts. 2. % of adults with financing accounts. 3. % of adults with life insurance/takaful policies.	The size of the banked population, defined as the proportion of adults with a bank account relative to the total adult population, serves as a measure of the banking system's penetration. In an economy where every adult has a deposit, and/or credit account and/or life insurance/takaful policies, this measure would have a value of one
Responsible usage	1. % of customers with active deposits. 2. % of customers with performing financing accounts	This input stems from the concept of being 'under-banked' or 'marginally-banked', where individuals with bank accounts use the services only minimally. Therefore, simply having a bank account does not guarantee financial inclusivity, it is equally important that banking services are adequately utilized. To incorporate the responsible usage dimension into the IFI, the central bank evaluates two essential banking services—deposits and credit—by analyzing the percentage of customers with active deposit accounts and the percentage of customers with performing financing accounts.
Satisfaction level	% of customers satisfied with overall financial service.	This dimension aims to capture the quality aspect, which is more complex both conceptually and in terms of measurement. The indicator selected by Bank Negara Malaysia (BNM) is a qualitative measure based on responses gathered from a demand-side survey. In the case of Malaysia, the percentage of customers satisfied with overall financial services is used as

	the sole indicator for measuring this dimension

Source: *Abd Rahman, 2013*

4.0 Methodology

4.1 Data

This study uses primary data collected through a survey method, involving face-to-face interviews with respondents. The respondents consist of extreme poor individuals from Perlis who participated in the BMT program. The sampling frame was based on *e-Kasih* data obtained from the Perlis Implementation Coordination Unit (ICU), and a total of 315 head-of-household (KIR) samples who were engaged in income-generating activities were analyzed. The study areas include three parliamentary in Perlis: Kangar, Arau, and Padang Besar (Table 2).

Table 2: Sample size and study area

Parliamentary	Sample
Kangar	136 (33.3%)
Arau	103 (36.7%)
Beseri	37
Kayang	4
Kuala Perlis	2
Padang Besar	33(30.0%)
Total	315

4.2 Measurement the financial inclusion index for this study

The Malaysian Financial Inclusion Index (MFII) is typically calculated based on four dimensions. However, due to challenges in data availability and the recent development in literature review, this study has utilized only two of the four dimensions recommended by the MFII, which are take-up rate and responsible usage. According to the MFII, the take-up rate is measured by the percentage of adults with deposit accounts, the percentage of adults with financing accounts, and the percentage of adults with life insurance or takaful policies. Meanwhile, responsible usage is measured by the percentage of customers with active deposit accounts and the percentage of customers with performing financing accounts.

This approach aligns with Sarma (2008), who also computed the Index of Financial Inclusion (IFI) using two dimensions. However, Sarma's computation was based on the availability and usage dimensions. Given the data constraints in this study, the IFI will be calculated using the take-up rate and responsible usage dimensions, which will be further assessed through specific items and scales. The items for both dimensions will be surveyed using a nominal scale.

Dimension take up rate (loans/financing, insurance/takaful, and saving/investment)

Take up rate dimension is one of dimension for Malaysian financial inclusion index (MFII) and it is comparable to banking penetration dimension and one of the most important indicators of financial inclusion (Chattopadhyay, Sadhan Kumar, 2011). Ideally, inclusive financial system should penetrate widely amongst its users. The size of the banked population is actually the

number of adult population having a bank account is a measure of the banking penetration of the system. Thus if every adult person in an economy has a bank account, then the value of this measure would be equal to 1. In the absence of the data on banked population, the study has considered the respondents with credit account or loan account (housing loan, vehicle loan, personal loan/education loan and credit card), insurance/takaful policies, and saving account and National Education Saving Plan (SSPN), while Amanah Sanahm Bumiputra in kind of unit trust to represent investment account as the indicators of take up rate or financial penetration as an indicator of this dimension. To be more precise, this study only takes into consideration respondents who incurred fix loan/financing's expenses, fix life insurance/takaful premium and has fix saving amount as proxy for adults with loan, investment or saving account. Thus, if every adult person in an economy has made fix loan installment, incurred fix expenses for insurance/takaful premium and made fix investment or fix deposit in saving account, ASB and National Education Saving Plan (SSPN), then the value of this measure would be equal to one.

Table 3: Indicators for dimension of take up rate

Indicators (Saving and Investment)	**Scales**
Saving in bank account Amanah Saham Bumiputra National Education Saving Plan (SSPN)	0. Not Applicable 1. No 2. Yes
Indicators (Loans and Financing)	
Housing loan Vehicle loan Personal/education loan Credit Card	0. Not applicable 1. No 2. Yes
Indicators (Insurance/Takaful)	
Life insurance/takaful policies	0. Not applicable 1. No 2. Yes

Indicators for dimension of responsible usage

This input emerges from the concept of 'under-banked' or 'marginally-banked', whereby some people with bank accounts use the services provided very parsimoniously. Thus having a bank account does not ensure inclusivity; it is also imperative that the banking services are utilized adequately. To incorporate the responsible usage dimension in the IFI, the central bank considers two basic banking services (deposit and credit) by using indicators on percentage of customers with active deposits and percentage of customers with performing financing accounts. In order to incorporate the usage dimension in this study, it has considered two basic services of the financial institutions loans and financing, and saving and investment. Accordingly, the schedule or non-schedule loans installment, insurance/takaful premium contribution and saving investment amount as proportion has been used to measure this dimension. Customers with schedule loan installment, and schedule saving or investment as proxy for customers with performing loans account, and customer with active deposits.

Table 4: Indicators for dimension of responsible usage

Indicators (Saving and Investment)	**Scales**

Saving in bank account Amanah Saham Bumiputra National Education Saving Plan (SSPN)	1. Not schedule 2. Schedule
Indicators (Loans and Financing)	
Housing loan Vehicle loan Personal/education loan Credit Card	1. Not schedule 2. schedule

4.3 Data analysis and computation of IFI

The data is analyzed using both descriptive and multidimensional index approaches to compute the Index of Financial Inclusion (IFI). Descriptive analysis is presented in tables, using averages and percentages for statistical interpretation. The multidimensional index approach is displayed in Table 9, which is appropriate as the IFI is calculated across various dimensions. This method is similar to the one used by the UNDP for calculating well-known development indices like the HDI. In our study, we adapted and adopted the methodology from Abd. Rahman (2013), with slight modifications. Specifically, we use data from two dimensions instead of four, and the IFI computation is shown in Table 5. As outlined by Abd. Rahman (2013), the targets were set based on the consensus of the financial inclusion working group at Bank Negara Malaysia. These targets were benchmarked against global Findex results for more developed countries.

Additionally, weights for each indicator were assigned based on their importance, while both dimensions were given equal weight. Depending on the calculated IFI values, the results are categorized into four levels of financial inclusion:

(i) $0.75 < IFI \leq 1$ – High financial inclusion
(ii) $0.5 \leq IFI < 0.75$ – Above average financial inclusion
(iii) $0.25 \leq IFI < 0.5$ – Moderate financial inclusion
(iv) $0 \leq IFI < 0.25$ – Low financial inclusion.

Computation IFI for study

Inclusive financial system is judged from several dimensions, however due to data limitation, we just calculate only two of FII dimensions to analyse financial inclusion index among hardcore poor in Perlis. These two dimensions were borrowed from Abd Rahman (2013) and the IFI computation is shown in Table 5. The weight for each indicator is set to reflect the importance of the indicators at this point in time, but the dimensions are weighted equally.

Table 5. Computation the Index of financial inclusion for hardcore poor income

Dimension	Indicators	Data	Target	Index of each indicators	Weightage	Index of each dimensions	Equal weithtage dimensions	Equally distributed FII
Take up rate	**% of adult population with deposit account**	**52**	**315**	**0.165**	**0.5**	**0.12**	**0.5**	**0.10**
	Bank saving	31						
	Amanah Saham Bumiputra (ASB)	20						
	National Education Saving Plan (SSPN)	1						
	% of adult population with life insurance/takaful policies	**6**	**315**	**0.019**	**0.25**			
	% of adult population with financing accounts	**35**	**315**	**0.111**	**0.25**			
	Housing Loan	8						
	Vehicle Loan	12						
	Personal/Education Loan	15						
	Credit card	1						
Responsible Usa	**% of customers with active deposits**	**23**	**315**	**0.073**	**0.5**	**0.094**	**0.5**	
	Bank saving	16	315					
	Amanah Saham Bumiputra (ASB)	6	315					
	National Education Saving Plan (SSPN)	1	315					
	% of customers with performing financing accounts	**36**	**315**	**0.114**	**0.5**			
	Housing loan	8	315					
	Vehicle Loan	12	315					
	Personal/Education Loan	15	315					
	Credit card	1	315					

The result of equally distributed IFI was 0.1, so it was within the range of (0 ≤ IFI < 0.25 Low financial inclusion).

5.0 Study Results

5.1 Demographics

Table 6 shows the demographics of the respondents. They consist of gender, marital status, education level, and age. Most of the respondents are 75.1% male and 24.9% female. The majority of them are 80% married and 20% single. As for the highest educational achievement, 49.53% with SRP/PMR/LCE and below and followed with SPM/SPMV/SMA/MCE, about 50.47%. Majority of them, 76.5% is within the productive age range which between 36 years to 55 years. In term of employment, majority of them are self – employed and 65.1% are earned monthly income less than RM1,000.00.

This table provides a breakdown of respondent demographics, including gender, marital status, educational background, type of employment and monthly income.

Table 6: Respondent Demographics - Category Data

Characteristics	N	Percent
Gender		
Female	76	24.9%
Male	239	75.1%
Marital Status		
Single	63	20.0%
Married	252	80.0%
Education		
None	22	6.98%
UPSR/Penilaian D5	46	14.6%
SRP/PMR/LCE	88	27.94%
SPM/SPMV/SMA/MCE	137	43.49%
STU/STAM/STPM/Diploma/Degree/Master	22	6.98%
Age		
less than 25 years	2	0.6%
6 to 35 years	31	9.8%
36 to 45 years	115	36.5%
46 to 55 years	126	40.0%
56 to 65 years	40	12.7%
above 66 years	1	0.3%
Type of Job		
Not working	61	19.4%
Pensioner	2	0.63%
Private	65	20.6%
Self employed	187	59.4%
Total Income		
less than RM1000	205	65.1%
RM1001 to RM2000	101	32.1%
RM2001 to RM3000	6	1.9%
RM3001 to RM4000	1	0.3%
Above RM4001	2	0.6%

5.2. Result of IFI

Using data from 315 respondents across two dimensions, take-up rate and responsible usage, the overall Index of Financial Inclusion (IFI) values were computed and are shown in Table 5. The results indicate an IFI level of 0.10 among the respondents, classifying them as having a low level of financial inclusion. When comparing the two dimensions, the take-up rate exhibited a higher index value (0.12) compared to responsible usage, which had an index of (0.094).

The take-up rate dimension was measured by examining the percentage of respondents with savings accounts, investments in Amanah Saham Bumiputra (ASB) or other unit trusts, and participation in the National Education Savings Plan (SSPN). However, only 9.4% of respondents had a savings account, a strikingly low figure compared to Bank Negara Malaysia's financial inclusion demand-side survey, which reported that about 92% of individuals had deposit accounts with regulated financial institutions (A. Rahman, 2013). Approximately 20 respondents had investments in unit trusts such as ASB. Despite various government incentives to encourage parents to open SSPN accounts, the take-up rate for this savings plan was also reported to be very low. Similarly, the take-up rate for life insurance or takaful policies was low as well. Moreover, the proportion of respondents with financing accounts was even lower than those with savings and investment accounts.

The responsible usage dimension was represented by the percentage of respondents with active deposit/investment accounts and performing financing accounts. In this study, these indicators were measured by analyzing the behavior of depositors, investors, and borrowers, specifically whether they made scheduled monthly deposits or investments and timely (scheduled) payments for their financing.

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