Financial Inclusion in the Philippines: A Regional Assessment

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Abstract

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The current state of financial inclusion in the Philippines appears relatively weak, lagging behind some of its comparators. Assessing financial inclusiveness on a regional basis by constructing an index of financial inclusion (IFI), the study finds that five regions are classified as high IFI regions, three regions are categorized as medium IFI regions, while nine out of the 17 regions in the country fall under the low IFI group. Low IFI regions are associated with relatively lower income, urbanization levels, and functional literacy rates. Moreover, the study finds that low IFI regions in the Philippines are likewise associated with dominance of entrepreneurial activity as main source of income and have higher shares of employment in agriculture.

I. Introduction

Defining Financial Inclusion

Over the past decade, financial inclusion has become the maxim in the financial and economic arena. Highlighting its importance in achieving sustainable growth, financial stability, and poverty alleviation. In fact, it has even transcended from simply being an economic/financial agenda to an important social agenda. The idea of financial inclusion has garnered support from various multilateral agencies like the Asian Development Bank (ADB), International Monetary Fund (IMF) and World Bank (WB). Cognizant to the importance of this financial development, this has likewise become a widely recognized priority issue by policy makers in the Philippines. According to Hannig and Jansen (2010),

"Financial inclusion aims at drawing the "unbanked" population into the formal financial system so that they have the opportunity to access financial services ranging from savings, payments, and transfers to credit and insurance."

As the current administration embarks on a quest for an inclusive growth, the importance of financial inclusion becomes more apparent. Economic growth is no longer sufficient, rather a growth that trickles down all the way down to the bottom of the pyramid is now a necessity. Despite being among the countries in Southeast Asia to register marked economic performance and displayed resilience amid the global economic crunch, the Philippines continues to be plagued by a "jobless growth," with the rate of unemployment pinned at seven percent. To quote Mthuli Ncube, Chief Economist & Vice-President, African Development Bank Group,

"The concept of inclusive growth is multifaceted and has financial inclusion as one of its main building blocks. For sustained and inclusive development to thrive, a great deal of innovation and thinking is needed to ensure that appropriate financial services and instruments are put in place for the benefit of the poor and other vulnerable groups." (Ubinas, 2013)

Financial inclusion plays an critical role in overall development of the financial system and economy. According to Khan (2012), the overall financial system benefits from greater inclusion by: "1) enhance saving and credit to the people at the bottom of the pyramid; 2) providing banks a more stable deposit base contributed by retail customers; and 3) promoting financial stability and discourages informal sectors." In addition, financial inclusion generates a "multiplier effect on the economy through enhanced saving and credit outreach as well as makes monetary policy more effective." Khan (2012)

Given the importance of financial inclusion, how can we assess or gauge a country/state's level of inclusiveness? While there are several indicators available to assess the state of various financial aspects, each of these indicators fails to capture the overall extent of financial inclusion when evaluated on its own. This could potentially result in misleading assessments on the country's overall level of financial inclusion. (Sarma, 2008) Thus, an index is crucial in evaluating a country/state's level of financial inclusion. stress the importance of gauging banking outreach on a regional level, considering that bank branches and ATMs could be concentrated in the urban areas and the distribution of loans and deposits could be disproportionate across regions/states.

The rest of the paper is organized as follows: section II explains the motivation of the study; section III provides a comprehensive overview of the current state of financial inclusion in the Philippines; section IV discusses the relevant literature; section V tackles the research design of the paper; section VI presents the results and an analytical discussion of the index; and section VII concludes the paper as well as presents policy recommendations.

II. Motivation of the Study

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The study intends to delve deeper in explaining the relatively weak state of financial inclusion in the Philippines by providing a more empirical regional-wise analysis on the issue and identifying the socio-economic factors that could shed light on the financial inclusion gap across the different regions. The study first constructs an index of financial inclusion (IFI) in order to gauge the financial inclusiveness in each region as well as categorically distinguish the regions that are falling behind. From there, the paper gathers insights on which dimension particularly needs focus and examine key factors that are associated with low IFI regions.

In addition, other future potential contributions of this research include the following:

- 1) Establish an index that will serve as an input in financial policy formulation;
- 2) Enable the concerned policy makers to monitor the progress and effectiveness of policy initiatives on financial inclusion, both in magnitude and pace; and
- 3) Support further empirical studies relevant to financial inclusion and its impact on growth, poverty and financial stability. Sarma (2008)

Table 1 presents the 17 regions that comprise the Philippines and the provinces under each region.

Table 1: Region	Table 1: Regional Composition of the Philippines				
Region	Provinces				
National Capital Region (NCR)	Cities of Caloocan, Las Piñas, Makati, Malabon,				
	Mandaluyong, Manila, Marikina, Muntinlupa, Navotas,				
	Parañaque, Pasay, Pasig, Quezon, San Juan, Taguig and				
	Valenzuela, and the Municipality of Pateros				
Cordillera Administrative Region	Abra, Benguet, Ifugao, Kalinga Apayao, and Mountain				
(CAR)	Province				
Region I – Ilocos Region	Ilocos Norte, Ilocos Sur, La Union, and Pangasinan				
Region II – Cagayan Valley	Batanes, Cagayan, Isabela, Nueva Vizcaya, and Quirino				
Region III – Central Luzon	Aurora, Tarlac, Pampanga, Zambales, Bataan, Nueva				
	Ecija, and Bulacan				
Region IV A – CALABARZON	Cavite, Laguna, Batangas, Rizal, and Quezon				
(Cavite, Laguna, Batangas, Rizal,					
and Quezon)					
Region IV-B MIMAROPA	Occidental Mindoro, Oriental Mindoro, Marinduque,				
(Mindoro, Marinduque, Romblon,	Romblon, and Palawan				
and Palawan)					
Region V – Bicol Region	Camarines Norte, Camarines Sur, Albay, Masbate,				
	Sorsogon, and Catanduanes				
Region VI – Western Visayas	Negros Occidental, Iloilo, Antique, Guimaras, Aklan and				
	Capiz				
Region VII – Central Visayas	Bohol, Cebu, Negros Oriental, and Siquijor				
Region VIII – Eastern Visayas	Leyte, Southern Leyte, Biliran, Eastern Samar, Northern				
	Samar, and Samar				
Region IX – Zamboanga Peninsula	Zamboanga Sibugay, Zamboanga del Norte, Zamboanga				
	del Sur, Zamboanga City (Zamboanga Peninsula), and				
	Isabela City (Basilan Province)				
Region X – Northern Mindanao	Bukidnon, Camiguin, Misamis Oriental, Misamis				
	Occidental, and Lanao del Norte				
Region XI – Davao Region	Davao City, Davao del Norte, Davao del Sur, Davao				
D : VIL COCCEVEADCEN	Oriental, and Compostela Valley				
Region XII – SOCCSKSARGEN	North Cotabato, South Cotabato, Sultan Kudarat				
(South Cotabato, Cotabato, Sultan	Province, Saranggani, and the cities of Cotabato, General				
Kudarat, Sarangani and General Santos City)	Santos, Kidapawan, Koronadal, and Tacurong				
Region XIII – Caraga	Agusan del Norte, Agusan del Sur, Surigao del Norte,				
Kegioli Alli – Calaga	and Surigao del Sur				
Autonomous Region in Muslim	Basilan, Lanao del Sur, Sulu and Tawi-Tawi, and				
Mindanao (ARMM)	Maguindanao Province				

Source: Bangko Sentral ng Pilipinas (2010), Regional Economic Developments in the Philippines

III. Financial Inclusion: How Does the Philippines Fair?

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According to the World Bank (2012), 2.5 billion people remains "unbanked" and three quarters of the poor people worldwide do not have a bank account. Table 2 presents a cross-country summary of selected financial inclusion indicators sourced from the World DataBank G20 Financial Inclusion Indicators. Based on the table, the Philippines lags

behind its Southeast Asian comparators, espacially Malaysia and Thailand in both banking penetration and availability of financial services. In terms of number of deposit accounts per 100 adults and ATMs per 100,000 adults, the Philippines barely comprises a third of the said countries' figures.

Table 2: Selected Finance	ial Inclusion	n Indicators	s Across Sout	th East As	ia
	Cambodia	Indonesia	Philippines	Malaysia	Thailand
	Banking P	enetration			
Account at a formal financial institution (% age 15+)	3.7	19.6	26.6	66.2	72.7
Number of deposit accounts with commercial banks per 1,000 adults	131.5	623.7	492.8	1642.2	1414.3
Ava	ilability of B	anking Serv	vices		
Commercial bank branches (per 100,000 adults)	4.3	8.5	8.1	10.5	11.3
Automated teller machines (ATMs) (per 100,000 adults)	6.1	16.5	17.7	56.4	77.9

Source: World DataBank G20 Financial Inclusion Indicators

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Sarma (2008) evaluated several countries' financial inclusiveness for the year 2004 and finds that the Philippines are among the countries that fall under the low financial inclusion category. In particular, the Philippines ranks 34th out of 55 countries in the three-dimensional index and 53rd out of 100 countries in the two-dimensional index. Table 3 presents the constructed index and the ranking of selected countries based on the research, only Malaysia and Thailand reached the medium financial inclusion category while the rest are in the low financial inclusion group.

Table 3: Index of Financial Inclusion of Selected Southeast Asian Countries, 2004						
Country	IFI	Rank	IFI	Rank		
	3-Dime	nsional	2-Dime	nsional		
Malaysia	0.406	10	0.367	20		
Thailand	0.360	14	0.303	30		
Philippines	0.146	34	0.163	53		
Indonesia			0.141	60		
Cambodia			0.015	100		

Notes: 1) IFI values between 0.5 to 1 is classified as high financial inclusion, while between 0.3 to 0.5 is classified under medium financial inclusion, and values under 0.3 are considered as low financial inclusion; and 2) The two-dimensional index excludes the banking penetration dimension, measured as the number of bank accounts as a proportion to the total population. Source: Sarma, M. (June 2008). *Index of Financial Inclusion*.

In Sarma's (2012) succeeding research on the same area, the Philippines continues to be in the low financial inclusion category, albeit a recording a higher ratio at 0.258 in 2010. Table 4 shows the index of financial inclusion for selected Southeast Asian countries for the periods 2004-2010. The Philippines advanced at a much slower pace compared to its other neighbors over the past six years, particularly Malaysia and Thailand. These countries have transcended to the high financial inclusion group, with Malaysia displaying a relatively swift progress.

Table 4: Index of Financial Inclusion of Selected Southeast Asian Countries2004 - 2010										
Country	2004	2005	2006	2007	2008	2009	2010			
Malaysia	0.636	0.692	0.709	0.710	0.720	0.710	0.791			
Thailand			0.643	0.655	0.655	0.673				
Philippines	Philippines 0.216 0.221 0.218 0.228 0.231 0.258									
Cambodia			0.037	0.054	0.061	0.074	0.087			

Note: IFI values between 0.6 to 1 is classified as high financial inclusion, while between 0.3 to 0.6 is classified under medium financial inclusion, and values under 0.3 are considered as low financial inclusion

Source: Sarma, M. (July 2021). Index of Financial Inclusion- A Measure of Sector Inclusiveness.

According to Socioeconomic Planning Secretary Artemio Balisacan, "only 41 out of 100,000 Filipinos own a deposit account." Moreover, the number of deposit accounts per 100,000 population is likewise still very far from the target of 750 by 2016, registering only at 41.3 in the first half of 2012. (NEDA, 2013 and De Leon, 18 February 2013) These statements are parallel to the results of the Consumer Finance Survey (CFS) conducted by the Bangko Sentral ng Pilipinas (BSP).¹ Based on the survey eight out of ten households are unbanked, and among those with deposit accounts, approximately 71 percent only have one bank account. The percentage of banked households in NCR, about 28 percent, is significantly higher than that in AONCR, roughly 16 percent only. In terms of credit availment, the survey results revealed that most of the respondents acquired their assets/properties through cash payment instead of borrowing, and on average, less than seven percent availed of loans to acquire properties/assets. (CFS, 2009)

III. Review of Related Literature

The Index

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Sarma's (2008) cross-country research on financial inclusion introduces the concept of constructing an index of financial inclusion (IFI) in order to measure a country's current state of financial inclusion. The study provides three-dimensional IFIs for 55 countries and two-dimensional IFIs for 100 countries for the year 2004. The two-dimensional IFI

¹ Reference year: 2009 as the reference year. Coverage: National Capital Region (NCR), Region 1- Ilocos Region, Region 7- Central Visayas and Region 11- Davao Region (the last three regions are classified as Areas Outside NCR (AONCR)). The survey looks at the financial conditions of households, including their sources of financing and level of indebtedness.

² Data sources: 2012 Family Income and Expenditure Survey, NSO and NSCB.

³ "Poverty incidence proportion of families/individuals whose income is below the poverty threshold or whose income is not sufficient to buy the basic food and non-food requirements, , while the subsistence incidence is proportion of families/individuals whose income is below the food threshold or whose income is not sufficient to buy food items that will meet the basic food requirements." (NSCB Resolution No. 2, series of 2007) The annual per capita poverty threshold Php 18,935, while the annual per capital subsistence threshold is Php13,232 ig

excludes the dimension pertaining to banking penetration. The dimensions are as follows with their corresponding purpose and indicators employed:

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Dimension	Captures/Measures	Indicator Employed
Banking	Size of "banked"	Number of bank accounts as a proportion of
penetration	population	the total population
Availability of	Accessibility of banking	Number of bank branches per 1000 population
Banking Services	services to its users	
Usage	Utilization of banking	Volume of credit and deposit as a proportion of
	services	the country's gross domestic product (GDP)

The paper also provides a discussion on the significance of the said dimensions in measuring financial inclusion:

- 1. Banking penetration (dimension 1): An inclusive financial system should have as many users as possible, that is, an inclusive financial system should penetrate widely amongst its users... The proportion of people having a bank account is a measure of the banking penetration of the system;
- 2. Availability of banking services (dimension 2): In an inclusive financial system, banking services should be easily available to the users. Indicators of availability are banking outlets (offices, branches, ATMs and so on); and
- 3. Usage (dimension 3): This dimension is motivated by the notion of 'underbanked' or 'marginally banked' people... These underbanked people, despite having access to the formal financial services, are unable to use the financial services, due to various reasons... These factors reflect negatively on the inclusiveness of a financial system. Thus, merely having a bank account is not enough for an inclusive financial system; it is also imperative that the banking services are adequately utilized.

Sarma (2008) uses an approach similar to the United Nations Development Programme's (UNDP) method in measuring development indices. Each dimension is computed as follows: $d_i = \frac{A_i - m_i}{M_i - m_i}$, where: A_i = actual value of the dimension, M_i = maximum value of dimension i, and m_i = minimum value of dimension i. This ensures that the value of d_i will fall between 0 and 1. To construct the IFI for a particular country, Sarma (2008) measured the normalized inverse Euclidean distance of the point representing the country in the n-dimensional Cartesian plane from the ideal point, which is the point where all dimensions equal to one. The formula is as follows:

$$IFI_i = 1 - \frac{\sqrt{(1 - d_1)^2 + (1 - d_2)^2 + \dots + (1 - d_n)^2}}{\sqrt{n}}$$

where each d_i captures a particular dimension (i.e. penetration, availability or usage) and n is the number of dimensions.

The study finds that among the 55 countries (under the three-dimensional IFI) only five countries belong to the high IFI classification (IFI values of 0.5 and up) led by Spain at 0.737, while nine countries fall under the medium IFI category (IFI values between 0.3 to 0.5), and the rest of the countries are under the low IFI classification (IFI values below 0.3), with Madagascar registering the lowest IFI value at 0.155. Furthermore, the study concludes that most countries in the high IFI group belonged to high-income OECD countries, while the frontrunners in the Southeast region are Malaysia, Singapore and Thailand. The Philippines, belonging to the low IFI group and ranks 34th out of the 55, recorded an IFI value of 0.146.

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Chattopadhyay (2011) applies the methodology developed by Sarma (2008) to generate a state-wise index for India in order to assess each state's financial inclusiveness. The study includes the years 2006-2009 and zooms in on West Bengal by conducting a survey in the said state to reinforce the paper's initial findings. The research's methodology varies slightly in the indicators used to measure the various dimension (summarized below), in light of the recent literary developments in the field and data availability.

Dimension	Chattopadhyay (2011)	Sarma (2008)
	Indicator	r
Banking penetration	Number of bank accounts (deposit and credit) as a proportion of the total population	Number of bank accounts as a proportion of the total population
Availability of Banking Services	Number of bank branches per 1000 adult population; Number of branches per square km	Number of bank branches per 1000 population
Usage	Volume of outstanding deposit and credit as proportion of state domestic product	Volume of credit and deposit as a proportion of the country's GDP

The research finds that only two states, Maharashtra and Karnataka, belong to the high IFI group, while five states fall under the medium IFI group. The remaining 16 states are classified as low IFI. The study notes that all the southern states belonged to either the high or medium IFI groups, while all the Eastern, Northeastern, and Central states fall under the low IFI category. In terms of monitoring policy initiatives, the paper concludes that there has been no considerable success in financial inclusion in India since the initiatives started in 2005-06.

Sarma (2012) continued the research on constructing a financial inclusion index by employing a more sophisticated methodology to measure the financial inclusiveness of 94 countries over the period 2004 to 2010. This approach differs from the one employed in Sarma's earlier study in the following aspects: 1) introduction of weights to the dimensions, depending on its perceived importance in gauging financial inclusiveness; 2) redefinition of the maximum value in the calculation of dimensions to correct for outliers and the varying values of the upper bound in the time series; 3) revision of the IFI formula; and 4) revision of the ranges for the classification of IFI values. The table below summarizes the dimensions, the weights assigned to each dimension, the upper limits, and the indicators employed to measure the dimension:

Dimension	Weight	Indicator	Upper Limit*
	(\mathbf{w}_i)		
Banking	1	Number of deposit bank accounts	2500 – average of at least two
penetration		per 1000 adult population	deposit accounts per adult
Availability	0.5	Number of bank outlets per 1000	60 – about 1667 clients per
of banking		population	bank branch
services		Number of ATMs per 1000	120 – 1 ATM per 833 adults
		population	
Usage	0.5	Volume of credit to the private	300 – credit plus deposit to
		sector and deposit mobilized from	GDP ratio of 3
		the private sector as proportion of	
		the country's GDP	

* Represents the 90th percentile of the distribution of the dataset except for the ATM dimension, which represents approximately the 92th percentile.

The study calculates each dimension as follows: $d_i = w_i \frac{A_i - m_i}{M_i - m_i}$, where w_i represents the weight assigned to that particular dimension. Albeit still based on UNDP's approach, the index differs in a sense that it is "based on a notion of distance from a worst and an ideal situations." It takes into account the distance between a particular point, X, from the ideal point, W, as well as from the worst point, O, as illustrated graphically in Chart 2. The calculation of the index uses a simple average of the Euclidean distance between X and O and the inverse Euclidean distance between X and W. The equation below presents the new IFI calculation for each country, where X₁ represents the distance between point X and the ideal point W. (Sarma, 2012)

$$IFI_{i} = \frac{1}{2} \left[\frac{\sqrt{(d_{1})^{2} + (d_{2})^{2} + \dots + (d_{n})^{2}}}{\sqrt{n}} + \left(1 - \frac{\sqrt{(1 - d_{1})^{2} + (1 - d_{2})^{2} + \dots + (1 - d_{n})^{2}}}{\sqrt{n}} \right) \right]$$

$$X_{1}$$

$$X_{2}$$

The countries are classified according to their respective IFI values. Those with IFI values between 0.6 and 1 are classified as high IFI countries, those with values between 0.3 and 0.6 are considered as medium IFI countries, and those with less than 0.3 are placed under the low IFI group. Results show that most countries with high IFI values belong to high-income countries, while those in the low IFI group are predominantly from low and lower middle income countries.

Factors Affecting the State of Financial Inclusion

According to the World Bank (2012), the most prevalent reasons for not having a bank account are insufficient income, transactions costs, distance of financial institutions and bureaucratic barriers. Sarma (2012) offers a parallel finding that in general "financial inclusion and income levels tend to move in the same direction." The World Bank's

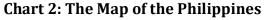
(2014) report on financial development also points out that barriers to financial access are more pronounced for the poor, women, youth and rural-based segments of the society.

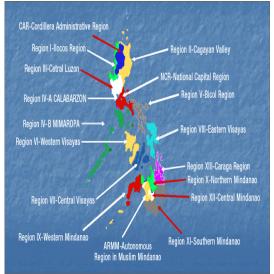
On a more micro-level, Chattopadhyay (2011) further assesses the degree of financial inclusiveness in the state by looking at socio-economic factors as well as the inhabitants' opinion on banking services in the three districts of West Bengal, a low IFI state. Chattopadhyay (2011) finds that a significant portion of the population is dependent on cultivation and that in the district of Birbhum, the loan extensions are particularly very low because the families living there "have no meaningful income and lack[s] direction in business plans." The research adds that those without bank accounts felt that they do not have enough income to open a bank account, albeit the perceived adequate banking facilities in the area.

In the case of the Philippines, the BSP and Alliance for Financial Inclusion (AFI) Financial Inclusion Data Working Group (2014) highlights the country's geographical and physical constraints, given its archipelagic nature, in facilitating financial access. The case study likewise adds that the "distribution of banking services is skewed highly to urbanized and populous regions," citing that Metro Manila itself accounts for "43 percent of the total number of deposits and 68 percent of the amount of bank deposits." Meanwhile, demand side factors identified by the CFS (2009) include insufficient money (92.8 percent), no need for bank/cash account (1.7 percent), unable to manage an account (1.5 percent), minimum balance is too high (1.2 percent), and dislike in dealing with bank/institutions (1.0 percent), among others. The survey concludes that credit access in some areas of the country is "relatively limited."

IV. Methodology

This study constructs a regional IFI for the Philippines in order to gauge the degree of financial inclusiveness of each region for the year 2012. The research methodology adopts that of Sarma's (2012) research with slight differences on the indicators employed due to data availability and the minimum values used in computing the values for the dimensions in order to correct for outliers. The data are sourced from the Bangko Sentral ng Pilipinas (BSP), National Statistics Office (NSO), National Coordination Board (NSCB), and the report on the State of Financial Inclusion in the Philippines (BSP, 2012). The dimensions as well as the indicators used in the calculation are as follows:





Source:www.top-destination-choice-the-philippines.com

Dimension	Notation	Indicator *
Bank penetration	P _i	Number of bank accounts per 1000 adult population
Availability of banking services	ABS _i	Number of banking offices per 1000 adult population Number of ATMs per 1000 adult population Number of alternative financial service providers per 1000 adult population
Usage	U _i	Outstanding loans and deposits as proportion of the region's GDP

Notes:

1) The data on adult (individuals above 15 years old) population is based on the 2010 census of population;

2) The data on the number banking offices include head offices, regular branches, microfinanceoriented branches, extension offices, other banking offices (OBOs), and micro-banking office (MBOs); and

3) The data on the number of alternative financial service providers include Non-stock savings and loan associations (NSSLAs), Credit Cooperatives, Non-bank financial institutions (NBFIs), pawnshops, remittance agents, e-money agents, and money changers/foreign exchange (FX) dealers.

Following Sarma's (2012) formula in deriving the IFI values, the IFI equation for each region is as follows:

$$IFI_{i} = \frac{1}{2} \left[\frac{\sqrt{(P_{i})^{2} + (ABS_{i})^{2} + (U_{i})^{2}}}{\sqrt{3}} + \left(1 - \frac{\sqrt{(P_{i})^{2} + (1 - ABS_{i})^{2} + (1 - U_{i})^{2}}}{\sqrt{3}} \right) \right]$$

where i represents a given region and P_i , A_i and U_i represents the availability and usage dimensions for that particular region.

Similarly, the estimates for the dimension (D_i), P_i, ABS_i and U_i, is calculated as $D_i = \frac{A_i - m_i}{M_i - m_i}$, where Ai represents the actual value of the indicator (number of bank accounts, ATM, banking offices, alternative financial service providers, outstanding deposits and loans as a proportion of the regional GDP), and M_i and m_i, represents the maximum and minimum values of the dataset, respectively. The upper bound likewise uses the 90th percentile as the maximum value, while the minimum value uses the 10th percentile as the lower bound to adjust for the outliers. Hence for a given dimension, any value above the upper limit is given the highest value—equivalent to the 90th percentile—and any value lower than the lower bound is given the minimum value average of the three indicators was used, following the method by Gupte et al. (2012) in estimating dimensions that have multiple indicators.

As for categorizing the IFI values, the study follows Sarma's (2012) classification, wherein IFI values between 0.6 and 1 are classified as high IFI regions, those with values between 0.3 and 0.6 are considered as medium IFI regions, and those with less than 0.3 are placed under the low IFI regions. Albeit, it is important to note that the top IFI does

not imply perfect financial inclusion, rather it is deemed as the "best" state of financial inclusion relative to the country under study, and the same goes for the bottom IFI.

V. Presentation and Analysis of Results

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Table 4 presents the IFI values for the different regions for the year 2012. The IFI values highly vary across the 17 regions, with the National Capital Region (NCR) on top and the Autonomous Region of Muslim Mindanao (ARMM) at the bottom. Among the 17 regions, five regions were able to attain high IFI values, to wit: National Capital Region (NCR), Region III-Central Luzon, Region IVA-CALABARZON, Region VII-Central Visayas and Region XI- Davao Region. The medium IFI regions include Cordillera Administrative Region (CAR), Region VI, and Region X. Meanwhile, nine out of the 17 regions fall under the low IFI group, namely: are Region I, Region II, Region IVB, Region VIII, Region IX, Region XII, Region XIII, and the ARMM. The average index value for "bank penetration" is 0.347, while the average for "availability of banking services" is 0.445, and the average index value for "usage" of banking services is 0.395. As for the overall IFI value, the average stands at 0.398, leaning more towards the lower-end of the medium IFI category.

Zooming in on the nine low IFI regions (kindly refer to Table 5), the average IFI value registers at 0.142, falling under the middle range of the low IFI category. The ARMM stands out registering the lowest IFI value for all dimensions. On the other end, the Region XII recorded a 0.293 IFI value, very close to transcending to the middle IFI category. The region's index for banking penetration is significantly higher than the overall average, however, the availability of banking services and the usage index fall below the overall average. This could suggest that while the population is relatively banked, utilization of financial services is limited, which perhaps could be related to the physical barriers to financial access. In contrast, MIMAROPA has a relatively high index for availability of banking services is at the minimum. This could imply that while there are many available bank outlets in the region, for some reason, the population remains relatively unbanked and financial services are not quite utilized.

	Regions	Banking Penetration	Availability of Banking Services	Usage	IFI
	National Capital Region	0.992	1.000	1.000	0.997
	Cordillera Administrative Region (CAR)	0.137	0.457	0.798	0.468
I-	llocos	0.065	0.127	0.125	0.108
II-	Cagayan Valley	0.000	0.362	0.341	0.252
-	Central Luzon	1.000	0.809	0.675	0.810
IV-A	Calabarzon	1.000	1.000	0.748	0.889
IV-B	MIMAROPA	0.007	0.428	0.000	0.185
V-	Bicol	0.090	0.213	0.063	0.129
VI-	Western Visayas	0.462	0.346	0.434	0.414
VII-	Central Visayas	0.695	0.908	1.000	0.847
VIII-	Eastern Visayas	0.085	0.153	0.000	0.089
IX-	Zamboanga Peninsula	0.087	0.101	0.172	0.123
Х-	Northern Mindanao	0.229	0.533	0.379	0.384
XI-	Davao Region	0.562	0.608	0.654	0.608
XII-	SOCOSKSARGEN	0.470	0.224	0.160	0.293
XIII-	CARAGA	0.024	0.292	0.170	0.175
	Autonomous Region of Muslim Mindanao	0.000	0.000	0.000	0.000
Descri	ptive Statistics				
	Average	0.347	0.445	0.395	0.398
	Standard Deviation	0.376	0.320	0.351	0.320

 Table 4: IFI values for the 17 regions in the Philippines, 2012

Legend:

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High IFI Region Medium IFI Region Low IFI Region

	Regions	Bank Penetration	Availability of Banking Services	Usage	IFI
I-	Ilocos	0.065	0.127	0.125	0.108
II-	Cagayan Valley	0.000	0.362	0.341	0.252
IV-B	MIMAROPA	0.007	0.428	0	0.185
V-	Bicol	0.09	0.213	0.063	0.129
IX-	Zamboanga Peninsula	0.087	0.101	0.172	0.123
XII-	SOCOSKSARGEN	0.47	0.224	0.16	0.293
VIII-	Eastern Visayas	0.085	0.153	0	0.089
XIII-	CARAGA	0.024	0.292	0.17	0.175
	ARMM	0	0	0	0
	Average	0.092	0.211	0.115	0.142

Table 5: Low IFI Regions

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The subsequent discussions explore the potential factors that could help shed light on the degree and variation of IFI values across region. Table 6 presents the correlation between the IFI values and selected socioeconomic indicators. While several other factors (e.g. inflation, unemployment, and average family size) were considered in the study, the following factors showed the strongest correlation. Before proceeding further, a cautionary remark is in order. It is important to keep in mind that correlation only implies association but not necessarily causality.

Table 6: Correlation with IFI Valu2012 (unless otherwise stated)	ies
Per Capital Gross Domestic	
Product (Current Prices)	0.742
Average Family Income	0.827
Poverty Incidence	-0.739
Subsistence incidence	-0.650
Level of Urbanization, 2010	0.846
Main Source of Income	
Salary/Wage	0.738
Entrepreneurial	-0.606
Other Sources	0.024
Functional Literacy Rate, 2008	0.692
Share of Agriculture in Total	
Employment	-0.809

Source: National Statistical Coordination Board, National Statistics Office, and Author's calculations

The most common reason cited by the respondents in the CFS (2009) for not having a bank account is the lack of money or insufficient income. The results of this study comport with the said statement, GDP per capita is positively correlated to the IFI values at 0.742. Chart 3 presents the regional per capita income of high and low IFI regions. Based on the chart, high IFI regions are associated with significantly higher per GDP capita income while low IFI regions are associated with lower per capita income. The high IFI and high income region is led by the NCR posting 312,137 Php, almost

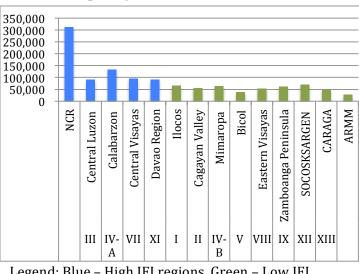


Chart 3: GDP Per Capita, by Region (High vs. Low IFI Regions), 2012

Legend: Blue – High IFI regions, Green – Low IFI regions

Source: National Statistical Coordination Board

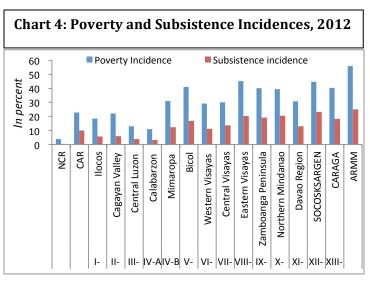
triple the national level of 110,314 Php. In stark contrast is the ARMM which has the lowest IFI value and the lowest per capita income at 27,819 Php. Probing further using the regional average family income, two notable trends can be observed: 1) high IFI regions generally have higher average family income; and 2) regions in the Luzon, even those low IFI regions, generally have higher average household income compared to their counterparts in Visayas and Mindanao. In particular, the three high IFI regions in Luzon rank in the top three nationwide, significantly exceeding the national average of 235,000 Php. The two other high IFI regions located outside Luzon, Region VII and XI, have relatively lower average family income at 209,000 and 194,000, respectively. Moreover, while low IFI regions are generally associated with lower average family income at 204,000 and 195,000, respectively. These levels are almost at par with the high IFI regions outside Luzon. The lowest average family income was recorded at the ARMM at 130,000, substantially lower than the national average. These results are consistent with Sarma's (2012) findings that income and level of financial inclusion moves in tandem.

² Data sources: 2012 Family Income and Expenditure Survey, NSO and NSCB.

Poverty Incidence and Subsistence Incidence ³

Regions with high poverty incidence and subsistence incidence translate to higher number of families with inadequate income to even support their basic needs. Thus, these families will most likely fall under the unbanked segment of the population with insufficient income to open deposit accounts. These segments are also unlikely to obtain credit from formal institutions because of their relative riskiness and their inability to comply with the documentary requirements. Regions with high IFI values are associated with lower levels of poverty incidence among its population, especially the three high IFI regions in Luzon: NCR, Central Luzon and CALABARZON. The NCR records the lowest poverty and subsistence incidence at 3.9 and 0.5 percent, respectively. As for the high IFI regions outside Luzon, their poverty and subsistence incidence are comparable, even higher, compared to some of the low IFI regions located in Luzon. This is parallel to the earlier findings on the average household income. Meanwhile, the low IFI regions in

Visayas and Mindanao have highest the poverty and subsistence incidences among its population. The ARMM has the highest poverty incidence 55.8 percent, more than half of the population in the region. Based on Chart 4, all the low IFI regions, except for Regions I and II in Luzon. are associated with poverty and subsistence incidences that are well above the national incidence. Table 6 indicates that poverty incidence and subsistence incidence are highly and negatively correlated with IFI values at -0.739 and -0.650, respectively.



Note: Poverty incidence and subsistence incidence for the Philippines are 25.2 and 10.4 percent, respectively. Source: Family Income and Expenditure Survey (FIES), National Statistics Office

³ "Poverty incidence proportion of families/individuals whose income is below the poverty threshold or whose income is not sufficient to buy the basic food and non-food requirements, , while the subsistence incidence is proportion of families/individuals whose income is below the food threshold or whose income is not sufficient to buy food items that will meet the basic food requirements." (NSCB Resolution No. 2, series of 2007) The annual per capita poverty threshold Php 18,935, while the annual per capital subsistence threshold is Php13,232 in 2012.

Level of Urbanization⁴

Most of the high IFI regions are located in Luzon, the largest and considered as the center of economic political activities and in the Philippines. Meanwhile, Regions VII and XI include the two major powerhouses economic and relatively highly urbanized cities, Cebu City and Davao City. respectively. Chart 5 presents the level of urbanization by region for the year 2010. On one hand, it may be observed that all of the high IFI regions are above the national level of 45.3, except for Region VII, which is slightly lower at 43.7. This suggests that regions that are highly financially inclusive are associated with higher levels of urbanization. Financial institutions are likely prefer to invest in areas that are more

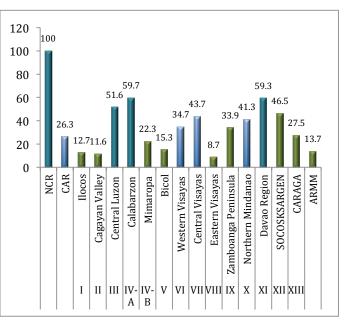


Chart 5: Level of Urbanization, 2010

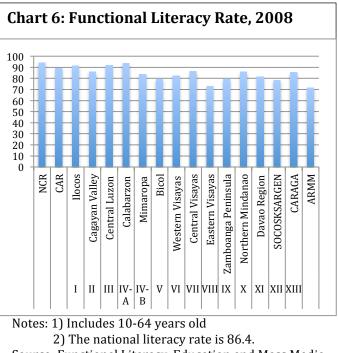
Note: The national level of urbanization is 45.3. Source: National Statistics Office

populous, progressive, and with higher income levels. Correspondingly, higher the percentage of population living in the urbanized area translates to more people having wider access to said financial institutions/services. This potentially explains the positive relationship between the level of financial inclusion and highly urbanized regions.

⁴ The NSO defines the level of urbanization, "as the proportion of the urban population to the total population for a specific period, which is calculated by dividing the urban population by the total population and multiplying the quotient by 100." (<u>http://www.census.gov.ph/sites/default/files/attachments/hsd/article/Explanatory%20Tex t.pdf</u>)

Functional Literacy Rate ⁵

This study finds that high IFI regions are generally associated with functional literacy rates that are above the national level of 86.4 percent. The NCR leads the pack at 94 percent. Chart 6 presents the functional literacy rate for each region. For the medium IFI group only the CAR, which has the highest IFI value in the group, has a functional literacy rate above the national standard. Correspondingly, the low IFI regions generally have functional literacy rates that are generally lower the national functional literacy rate. The two regions with the lowest IFI, ARMM and Region VIII, also has the lowest literacy rate at 71.6 and This 72.9, respectively. is



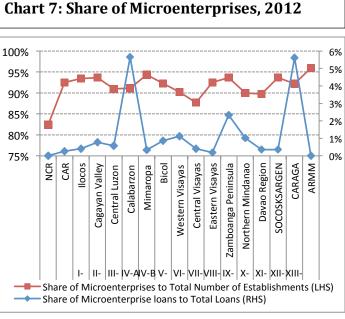
Source: Functional Literacy, Education and Mass Media Survey (FLEMMS), National Statistics Office

substantially below the national standard. Lehrer and West (2014) label literacy as "*the hidden hurdle*" in attaining financial inclusion. The article explains, "*systems that should work in theory breakdown when poor people are unable to learn how to use them....*" A functionally literate person means that the individual cannot only read and write but also able to compute or completed at least a high school level of education, as such, they are possibly more receptive or at ease in dealing with financial institutions. This could explain the positive correlation between IFI values and the region's functional literacy rate. (NSO, 2010)

⁵ The NSCB defines functional literacy as a significantly higher level of literacy that includes reading, writing, and numeracy skill. These skills must be sufficiently advanced to enable the individual to participate fully and effectively in activities commonly occurring in his life situation that require a reasonable capacity beyond oral and written communication. (http://www.census.gov.ph/content/technical-notes-1994-functional-literacy-education-and-mass-media-survey-flemms)

Main Source of Income⁶

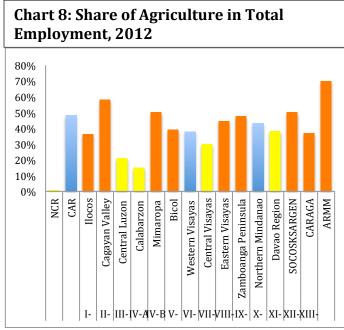
The research also tests for the correlation between the family's main source of income, by region, and the IFI and uncovers an interesting observation that regions wherein the family's main source of income is entrepreneurial are associated with low IFI values. Taking a step further, the research looked into the composition of the entrepreneurial activity in the regions and gains support on its proposition that initial these entrepreneurial activities could be dominated by microenterprises. Chart 7 shows the share of microenterprises the in total number of establishments as well as the share of outstanding microloans to outstanding total loans, by region. Microenterprises



Note: Classification of the size of establishments is based on number of employees. Enterprises with 1-9 employees are categorized as a microenterprise. Sources: Bangko Sentral ng Pilipinas and List of Establishments, Department of Trade and Industry

in high IFI regions account for about 82.4 - 91.1 percent while for low IFI regions microbusinesses comprise about 92.2 - 96.0 percent. Running a correlation test on the IFI values and the percentage distribution accounted by microenterprises shows a stronger negative correlation at -0.797. Taking these into account, this study surmises that these microenterprises could be largely home-based businesses with income sufficient only to cover day-to-day operations and possibly modestly supplement the family income. As such, there may be none or very little savings, which could potentially be used to open a bank deposit. Consequently, given the size of these businesses it could be that there is little motivation to apply for credit for business expansion and undergo the perceptibly cumbersome loan application process. Similarly, banks may not be very keen on lending to these markets considering the potential risks and the relatively small potential of earning significant returns. The share of loans to microenterprises is highest in Region II and XIII, however, it only accounts for six percent of the overall level of outstanding loans in the region.

⁶ Data Source: 2012 Family Income and Expenditure Survey, NSO



Share of Agriculture in Total Employment

Legend: Yellow columns - High IFI region; Blue -Medium IFI Region, and Orange - Low IFI region Source: Bureau of Agricultural Statistics

2006, 2009 and 2012			
	2006	2009	2012
Philippines	26.6	26.3	25.2
Fishermen	41.2	41.3	39.2
Farmers	38.5	38	38.3
Children	35.2	35.3	35.2
Self-employed and Unpaid Family			
Workers	30.6	29.9	29
Women	25.9	25.7	25.6
Youth	21.1	21.6	22.3
Migrant and Formal Sector	16	16.8	16.6
Senior Citizens	16.9	16.1	16.2
Individuals residing in urban areas	12.6	12.6	13

Table 7: Poverty Incidence for Basic Sectors

Note: Basic sectors are not mutually exclusive Source: Philippine Statistics Authority

agricultural livelihood. With insufficient income to barely cover their basic expenditure, this segment of the population are not likely able to save or borrow from the formal channels. This could explain why regions with high level of employment in the agricultural sector are associated with low IFI values.

Another interesting result of the study is that most regions with low IFI values are associated with relatively high employment shares in the agricultural sector, well above the overall share of agriculture in total employment of 32 percent. The medium IFI regions broadly follow a similar trend. Meanwhile, high IFI regions generally have relatively lower shares of employment engaged in agriculture, with figures much lower than the benchmark, except for Region This trend is shown in XI. Chart 8, which presents the share of agriculture to total employment, by region, for the 2012. The vear test for correlation suggests that low (high) IFIs are largely associated with high (low) reliance to agricultural livelihood. This finding becomes very logical once linked to average income levels and poverty incidence statistics. As shown in Table 7, the farmers and fishermen, both classified as agricultural workers, are the two basic which consistently sectors registered the highest poverty incidence. Hence, a significant the impoverished chunk of individuals or families comes from those engaged in the

Special Focus: The Autonomous Region of Muslim Mindanao (ARMM)

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Moulton and Dall (2006) used the term "fragile states" to characterize a phase of fragility in a nation's political or economic history, which stems from problems in governance. According to case study, "under the current USAID fragile states typology, the case of Mindanao in the Philippines is considered as a state in arrested development." However, the Australian Agency for International Development (AusAID) (2012) points out that in reality there are two Mindanaos that exist, "one largely conflict free and growing economically, and one that suffers from insecurity, extreme poverty, and a crisis of governance." The ARMM appears front and center in the latter. The peace and order situation is surmised as a key element that explains the region's dismal state of financial exclusiveness. Also, the conflict in the region contributed to its despondent economic and socio-economic conditions.

The region's development has been stunted because of the complicated and hostile security and political conditions. The armed conflict in ARMM brought about by decades of insurgency arising from the fight for autonomy by Moro groups as well as internationally-linked terrorist activities. (World Bank, n.d.) Likewise, clan wars, religion-related disputes, and violent political contestation also substantially contribute to the conflict in the region. (AusAID, 2012) Moreover, the region suffers from poor governance and weak rule of law. Table 8 summarizes the Good Governance Index (GGI) and Human Development Index (HDI) of provinces in the region. These figures indicate undesirable living conditions in the area.⁷ In addition, the region's poor infrastructure and unstable power supply have become a crucial impediment to its economic development. (BSP, REDP, 2012)

The security concerns and political instability in the region make the struggle for a more financially inclusive system more challenging. On one hand, for the financial services providers, the instability increases uncertainty in the market and its riskiness as an investment. The constant displacement of people makes the establishment of a permanent and stable client base in the area difficult, increasing the likelihood of loan non-repayments. These conditions discourage financial institutions to invest in the area. On the other hand, for the consumers, the constant displacement and uncertainty in the overall environment compels them to resort to informal mechanisms, which are usually a faster and easier means to access to credit. (African Development Bank, 2013) The constant threat of war also makes it difficult to maintain a stable livelihood and income

⁷ The NSCB developed the GGI to: "(1) draw attention to good governance outcomes... (2) determine and address the specific areas for improvement... and (3) improve the generation, analysis and utilization of government statistics by addressing the most pressing information needs of the society..." The GGI is constructed using three (3) major indices: the Economic Governance Index (EGI), the Administrative Governance Index (AGI) and the Political Governance Index (PGI). (http://www.nscb.gov.ph/ggi/techNotes.asp) The HDI "attempts to measure the complex concept of human development." The HDI takes the average of (1) life expectancy; (2) weighted average of functional literacy and combined elementary and secondary net enrolment rate: and (3) real per capita income. (http://www.nscb.gov.ph/technotes/hdi/hdi_tech_comp.asp)

stream as farms are abandoned and crops are destroyed amid the outburst of armed conflicts. Thus, the overall flow of credit is significantly disrupted, placing both the people and the financial institutions at the losing end. Table 9 presents the impact of conflict in region to credit availment in 2013.

Table 8: Good Governance Index and Human Development Index of the Provinces in the											
ARMM, for the years indicated											
Province	Good	Rank	Political	Rank	Human	Rank					
	Governance		Governance		Development						
	Index, 2008		Index, 2008		Index, 2009						
Basilan	104.38	65	91.08	56	0.460	62					
Lanao del Sur	130.67	26	101.72	13	0.416	70					
Maguinadanao	79.06	79	91.46	51	0.470	78					
Sulu	107.0	58	79.06	79	0.266	79					
Tawi-Tawi	128.73	30	90.12	59	0.310	77					

Notes: 1) For the ranking, 1 is the highest out of 79 provinces nationwide; 2) Political governance index is a component of the good governance index.

Sources: NSCB, and UNDP (2013), "Philippine Human Development Report 2012/2013"

		Muslim Domi				
Access to Credit	Before Conflict		After Conflict		Indigenous Peoples	
	Number	%	Number	%	Number	%
Credit Availment						
Yes	1,031	67.60	753	49.30	262	60.60
No	495	32.40	773	50.70	170	39.40
Total	1,526	100.00	1,526	100.00	432	100.00
Purpose of Credit						
Food	766	74.30	538	71.40	185	70.60
Farming	614	59.60	383	50.90	87	33.20
Education	52	5.00	29	3.90	18	6.90
Medicine	84	8.10	73	9.70	10	3.80
Others	33	3.20	35	4.60	9	3.40
Total	1,031*		753*		262*	
Sources of Credit						
Within Barangay	804	78.00	583	77.40	239	91.20
Outside Barangay	477	46.30	347	46.10	70	26.70
Within and Outside Barangay	1	0.10	1	0.10	0	0.00
Total	1.031*		753*		262*	

Table 9: Impact of Conflict to Credit Availment in ARMM, 2003

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Source: The World Bank (2003). "Social Assessment of Conflict-Affected Areas in Mindanao," p. 14.

In addition, the inhabitants of the region are predominantly Muslims who have different banking practices in accordance to the Islamic Shari'ah principles. This is another viable reason for the weak financial penetration in the region, as Islamic banking still has a very limited presence the Philippine financial system. To date, Al Amanah is the only Islamic Bank in the country and it has persistently struggled financially, thus, the privatization by the Development Bank of the Philippines. (Lema, K. and Vizcaino, B., 2013)

VI. Conclusion

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The low ratio of financial inclusion in the Philippines reflects the predominance of low IFI regions over the few high IFI regions in the country. While the lack of physical presence of financial institutions is an apparent constraint in the provision of financial services in the low IFI regions, the more interesting finding is the notable extrication between the availability of financial services and its actual utilization. The people in these regions are not taking advantage of the availability financial services and transactions are usually limited to bank deposits. This disconnection appears to have dragged down the financial inclusiveness in the relevant regions. Thus, initiatives need to be undertaken and efforts need to be intensified to encourage more active usage of financial services.

This study likewise offers evidence that even on a micro-level, higher financial inclusiveness is associated with higher levels of income, represented by regional GDP per capita in this study, as in the cross-country research findings. The rationale of this result is supported by the findings on other related variables—average family income as well as poverty and subsistence incidences and their correlation to the IFI values. Similarly, urbanization and literacy levels are also positively correlated with financial inclusiveness, comporting with the findings of other existing literature. On a more distinct note, the research finds that in the Philippines, low IFI regions are commonly associated with predominance of entrepreneurial activity as a main source of income and high share of employment to agriculture.

Looking at the overall structure of micro, small and medium enterprises (MSMEs) in the country, the numbers for medium-sized enterprises remain low, resulting in a "hollowed-middle" industry (Fajardo, 2013) Despite the dominance of microenterprises, the amount of outstanding credit extended to these enterprises remains modest compared to the total. The lack of credit could be among the factors that constrain these enterprises to transition to a bigger scale. Moreover, the relatively low credit provision could also be attributed to their inability to obtain bank loans due to insufficient credit profile information and weak asset base to serve as collateral given their relatively small size. Hence, the relatively weak link between the two markets could partly account for the low IFI value in the regions where entrepreneurial activities dominate the source of income.

The same can be inferred from the low IFI values in regions where employment is highly contingent on the agricultural sector. Farmers and fisher folks have relatively lower skill level at the same time face an inherent uncertainty in their livelihood and income stream, which adversely influence their inclination and ability to avail loans. However, the more crucial angle behind the financial exclusion of this segment could be on the supply side. Lending institutions catering to this market face "*high risk and thin profit margins*" because of the market's modest borrowing capacity and high default probability. (IPA, 2009) The inadequacy of the small farmers' assets to fully cover the loan reinforces the default concerns thereby further discouraging loan extensions. As a result, formal lending institutions are highly cautious in their lending activities to this segment. In addition, farmers predominantly reside in the rural areas where banking presence is limited, as described in the earlier section. (World Bank, 2014)

In conclusion, financial literacy can effectively tackle demand side issues, particularly in encouraging and easing the unbanked segment's apprehensions in transacting with financial institutions. Meanwhile, supply side constraints could be addressed by enhancing the institutional presence of formal fund providers and developing innovative financial instruments that would better cater to the untapped segments. Likewise, the presence of Islamic banking should be strengthened to reach out to the Muslim population in the country. Majority of the Muslim population resides in the Mindanao and thus, the expansion of Islamic banking services could generate significant improvements in the state of financial inclusion in the island where several low IFIs regions located. Furthermore, the glaring significance of income in financial inclusion highlights the need for decentralization of development, which is concentrated mainly in the NCR or in a sense largely centered in Luzon, in order to improve the economic position and income/job opportunities in other regions. However, income seems to be not the only important variable as seen in some low IFI regions in Luzon with relatively moderate-income levels, urbanization and literacy also play a role in a region's financial inclusiveness. Lastly, further research on the area could include more parameters to better capture the different dimensions, especially the usage dimension, as well as cover a longer time span to provide a more dynamic analysis, particularly in terms of assessing the effectiveness of programs or initiatives targeted at promoting financial inclusion.

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