

Assessing the Financial Inclusiveness of the Philippines

Tatum Blaise P. Tan*

The study analyzes the country's financial inclusiveness by constructing a multi-dimensional index of financial inclusion (IFI) across the 17 regions for the years 2011-2014. The modifications employed in deriving the index improved its analytical comparability and better captured the country's financial landscape. Using two comparative sets of IFI, the study consistently finds that over the past four years the country's financial inclusiveness has improved. The results subsequently highlight the persistently low IFI regions (Eastern Visayas, Zamboanga Peninsula, and Autonomous Region of Muslim Mindanao (ARMM)) that are lagging behind in financial development and utilization of financial services. Several regions are also "under-banked," exhibiting low values in the usage dimension vis-à-vis the other dimensions of financial inclusiveness owing largely to weak credit availability. Moreover, the difference in the simple and per capita weighted averages reveals more financial exclusion on a geographic perspective and hints of a bias in favor of highly urbanized regions. Lastly, the paper finds positive correlation between regional financial inclusiveness in the Philippines and regional output, income, and urbanization.

JEL Codes: G21, G200, O16

Keywords: Financial inclusion, Index of Financial Inclusion, Financial and Economic Development, Philippines

1. Introduction

Financial inclusion has become a maxim in the financial and economic arena, highlighting its relevance in achieving sustainable growth, financial stability, and poverty alleviation. In the Philippines, financial inclusiveness has become a widely recognized issue as the country pursues a more inclusive growth. The growing significance of financial inclusion stresses the need for a comprehensive measure to evaluate the country's level of inclusiveness. While several indicators are available to assess the various aspects of financial development, these indicators fail to capture of the overall extent of financial inclusiveness of the country when taken on its own, potentially resulting in misleading assessments (Sarma, 2008). Similarly, it is also important to undertake country-specific studies that analyze the level of financial inclusion on a more micro level. Conrad et al. (2008) and Beck et. al (2006) emphasized the importance of gauging banking outreach on a regional level, underscoring the concentration of Automated Teller Machines (ATMs) and bank branches in the urban areas and the skewed distribution of loans across regions. Thus, this study provides a country-focused assessment on the Philippines' state of financial inclusiveness using a regional multi-dimensional index of financial inclusion (IFI).

* Ms. Tatum Blaise P. Tan, Department of Economic Statistics, Bangko Sentral ng Pilipinas (BSP). The views expressed in this paper are the views of the author and do not necessarily reflect the views or policies of the BSP. Any errors and omissions are the responsibility of the author.
Email: tatumbleise.tan@gmail.com; contact number: (+632) 708-7224

Tan

The study builds on Sarma's (2012) methodology to derive two sets of IFI. The index captures the varying levels of financial inclusiveness across the 17 regions and identifies the dimension of financial inclusiveness that needs improvement, which is fundamental in policy formulation. Moreover, the index enables policymakers to monitor the progress, effectiveness, and long-term impact of policy initiatives on financial inclusion. The first set of IFI provides a measure of regional financial inclusiveness relative to existing financial conditions, while the second set employs standardized upper/lower bounds to improve its general and analytical comparability, and at the same time, incorporate the country's financial targets.

Results of the study reveal that the country's financial inclusiveness has improved from 2011 to 2014—evident in the higher national index and fewer regions under the low IFI category. The country's overall IFI values (at 0.346-0.384 from 2011 to 2014; medium financial inclusion) fall between Sarma's (2012) computed IFI values for the Philippines (at 0.216-0.258 from 2005 to 2010; low financial inclusion) and the calculated IFI values in the BSP's (2016) report on financial Inclusion (at 0.62-0.68 from 2011 to 2014). The disparity is due to the differences in the methodology, mainly in the identification/selection of indicators and optimal values. The different sample and period covered in Sarma's research is also a key factor in explaining the variation in the results. Meanwhile, parallel to existing literature, this research also recognizes the positive correlation between financial inclusion and output, income, and urbanization.¹

The findings also identified the consistently low IFI regions (Eastern Visayas, Zamboanga Peninsula, and Autonomous Region of Muslim Mindanao (ARMM)) that are falling behind in both financial access and development. In terms of dimension, the usage dimension consistently lags behind the other dimensions of financial inclusiveness (i.e., bank penetration and availability of financial services) mainly because of weak credit availability. This underscores two issues: 1) several regions being "under-banked;" and 2) notable disconnection between the availability and utilization of financial services.² The disparity in the simple and per capita weighted average of the overall IFI suggests that while the financial inclusiveness on a per capita basis is higher, there is still much exclusion from a geographic perspective. This hints of a bias in favor of areas with higher level of urbanization.

The paper is organized as follows: Section II provides an overview of the state of financial inclusion in the Philippines; Section III discusses the relevant literature; Section IV tackles the research design of the paper; Section V presents and analyzes the results; and Section VI concludes and offers recommendations.

2. How Does the Philippines Fair?

The World Bank's Global Findex Database shows that 69 percent of Filipinos remain unbanked, much higher compared to the 31 percent and 38 percent East Asia and Pacific and global averages, respectively, in 2014 (Demirguc-Kunt et al., 2015). The report indicates that only about three out of 10 Filipinos own a bank account, while only about 20 percent of the poorest 40 percent of households have a bank account. It also finds that more than 10 percent of Filipinos still rely on informal lenders, higher than the 5 percent global average (Taruc, 2015). Similarly, the recently released 2014 Consumer Finance Survey (Bangko Sentral ng Pilipinas (BSP), 2017) reveals that 86 percent of the Filipino households are unbanked, citing the lack of money as the main reason for not having a deposit account. The cross-country summary of selected financial inclusion indicators below shows the

Tan

Philippines lagging behind most of its regional comparators despite making significant strides in almost all the indicators over the years (Table 1).³

Table 1: Selected Financial Inclusion Indicators across Asia

Indicator	Year	BGD	KHM	IDN	IND	MYS	PHL	THA	VNM
Bank Penetration									
Account at a formal financial institution (% age 15+)	2011	32	4	20	35	66	27	73	21
	2014	31	22	36	53	81	31	78	31
Number of deposit accounts with commercial banks per 1,000 adults	2011	528	126	632	945	2,212	550	1,404	
	2012	565	146	700	1,035	2,305	498	1,468	
	2013	611	173	863	1,198	2,528	542	1,510	
Availability of Banking Services									
Commercial bank branches (per 100,000 adults)	2011	8	4	9	11	11	8	11	4
	2012	8	4	9	11	11	8	12	3
	2013	8	5	10	12	11	9	12	4
Commercial bank branches (per 1000 sq km)	2011	62	2	8	31	7	16	12	8
	2012	65	3	9	33	7	17	13	7
	2013	68	3	10	36	7	18	13	8
Automated teller machines (ATMs) (per 100,000 adults)	2011	4	6	25	9	53	17	88	20
	2012	5	7	35	11	53	19	96	21
	2013	6	8	42	13	56	23	104	22
Automated teller machines (ATMs) (per 1,000 sq km)	2011	29	3	22	26	34	36	93	43
	2012	40	4	32	33	35	41	102	46
	2013	52	5	40	39	36	49	111	49

Legend: BGD – Bangladesh, KHM – Cambodia, IDN – Indonesia, IND – India, MYS – Malaysia, PHL – Philippines, THA – Thailand, VNM - Vietnam

Source: World DataBank G20 Financial Inclusion Indicators

A report by the BSP and the Alliance for Financial Inclusion (2014) cites the country's geographical and physical constraints (i.e., archipelagic nature) in facilitating financial access. The report suggests a skewed distribution of banking services favoring highly urbanized and populous regions. Relevant to this, the National Baseline Survey on Financial Inclusion (NBSFI, BSP, 2015) finds that while more than half of Filipino adults in Metro Manila and in areas in Luzon (outside the National Capital Region (NCR)) have had banking transactions, Visayas and Mindanao registered only 35 percent and 43 percent, respectively. The report also finds that 43.2 percent of Filipino adults have savings, but the majority (68.3 percent) keep their savings at home.⁴

3. Review of Related Literature

Sarma (2008) pioneered the research on the construction of an IFI to measure a country's current state of financial inclusion. While the study employs an approach similar to the United Nations Development Programme's (UNDP) method in measuring human development indices (HDI), it differs in that it utilizes the concept of distance from an "ideal" point. The

Tan

paper uses normalized inverse Euclidean distance of the point representing the country in the n -dimensional Cartesian plane from the ideal point (i.e., the point where all dimensions equal to one) to derive the index for each country. Countries with IFI values ranging from 0.5 to 1 are classified as high financial inclusion; 0.3 to 0.5 as medium financial inclusion; and under 0.3 as low financial inclusion.

Using Sarma's (2008) methodology, studies analyzing the level of financial inclusiveness at lower levels of economic aggregation ensued. These include the works of Chattopadhyay (2011) and Yorulmaz (2013) which generated state-wise IFI values for India and Turkey, respectively. Chattopadhyay (2011) modifies the measurement by adding geographic penetration as an indicator for availability of banking services dimension. The research finds that only two states in India belong to the high IFI group, while 16 states fall under the low IFI category. The paper likewise concludes that there has been no considerable success in financial inclusion in India since the initiatives started in 2005-06. Meanwhile, Yorulmaz (2013) derives the IFI for 12 regions in Turkey and investigates the factors correlated with financial inclusiveness. The study finds that seven regions belong to the high IFI category, with just one under the low IFI group, and that highly financially inclusive regions/provinces are associated with more developed regions and higher income levels.

Table 2 summarizes the basic dimensions of an inclusive financial system identified by Sarma (2008, 2012) and Chattopadhyay (2011). First, an inclusive financial system is characterized by a wide penetration among its users, measured by the size of banked adult population. Second, under an inclusive financial system, financial services should be available to its users.⁵ Lastly, if there is unbanked population, there is also "under-banked" or "marginally" banked population. This refers to the underutilization of available financial services by the population due to various reasons (e.g., proximity and unaffordability). Hence, an inclusive financial system is not limited to owning a bank account, but extends to adequate use of the financial services offered.

Table 2: Basic Dimensions of an Inclusive Financial System

Dimension	Notation	Indicator
Bank Penetration	P_i	Number of bank accounts per 10,000 population
Availability of banking services	ABS_i	Number of banks per 10,000 population Number of ATMs per 10,000 population Number of bank per 1,000 square kilometer Number of ATMs per 1,000 square kilometer
Usage	U_i	Outstanding deposits as share of the region's GDP Outstanding loans as share of the region's GDP

Subsequent studies on the subject include that of Chakravarty and Pal (2010) and Gupte et al. (2012).⁶ Chakravarty and Pal (2010) employ an axiomatic approach to derive the index, which incorporates an inclusion sensitivity parameter that captures the marginal rate of substitution between the indicators. The index, an arithmetic average of the indicators, allows for the computation of each indicator's percentage contribution to the overall level of financial inclusiveness. Hence, the indicator most sensitive to financial inclusion should merit more emphasis in policymaking. Meanwhile, the study by Gupte et al. (2012) employs a geometric mean to construct the IFI, following UNDP's revised HDI calculation. The methodology extends the dimensions to include ease and cost of transactions. The former captures the ease in opening an account or getting a loan, while the latter reflects the bank

Tan

charges that adversely affect financial inclusiveness. However, both studies do not provide a definite categorization for the IFI values.

Sarma (2012) builds on her initial model to develop a more robust methodology that also satisfies various mathematical properties. The enhancements include: (1) assigning weights to the dimensions; (2) redefining the maximum value to correct for outliers and the varying values of the upper bound in the time series; (3) enhancing the IFI formula; and (4) modifying the ranges for the classification of IFI values. Table 3 summarizes the changes in the derivation of the dimensions of financial inclusiveness. The index is now *based on a notion of distance from a worst and an ideal situations*. It considers the distance between a particular point, X, from the ideal point, W, and from the worst point, O. The index is a simple average of the Euclidean distance between X and O and the inverse Euclidean distance between X and W.

The index is calculated as follows:

$$IFI_i = \frac{1}{2} \left[\underbrace{\frac{\sqrt{(d_1)^2 + (d_2)^2 + \dots + (d_n)^2}}{\sqrt{(w_1)^2 + (w_2)^2 + \dots + (w_n)^2}}}_{X_1} + \left(1 - \underbrace{\frac{\sqrt{(w_1 - d_1)^2 + (w_2 - d_2)^2 + \dots + (w_n - d_n)^2}}{\sqrt{(w_1)^2 + (w_2)^2 + \dots + (w_n)^2}} \right) \right]$$

Where X_1 measures the distance to the worst point and X_2 measures the inverse of the distance to the *ideal* point. D_i and w_i represent the dimensions and the ideal points for each dimension, respectively.

Table 3: Modifications in the Dimensions of Financial Inclusiveness

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

Notes: The upper limit represents the 90th percentile of the distribution of the dataset except for the ATM dimension, which represents approximately the 92nd percentile; and 2) Following the revised IFI classification, countries with IFI values between 0.6 to 1 are classified as high IFI countries, those with values between 0.3 to 0.6 are considered as medium IFI countries, and those with less than 0.3 are placed under the low IFI group.

4. Methodology

4.1 The Index

This study constructs two sets of IFI to gauge the degree of financial inclusiveness for each of the 17 regions in the country for the years 2011-2014 (Annex A). The methodology follows

Tan

that of Sarma's (2012) research, as adopted by other studies developing IFI for lower geographical levels, due to the ease in computation, its intuitiveness, and the notion of using proximity in the measurement (Negrin, 2012). The first set of regional IFI follows the indicators used in most literatures, except for the usage dimension, while the second set of regional IFI is designed to adapt to the country's financial landscape and provide better time-series and cross-sectional comparability. The indicators for the usage dimension divide the combined deposit and credit to gross domestic product (GDP) into two separate ratios.⁷ The second set of IFI utilizes bank branches and alternative financial service providers (AFSPs) per municipality/city as an alternative measure of geographical penetration to better capture the country's financial targets.⁸ The data are sourced from the BSP and the Philippine Statistics Authority (PSA).

Following Sarma (2012), the IFI equation for each region is as follows:

$$IFI_i = \frac{1}{2} \left[\frac{\sqrt{(P_i)^2 + (AFS_i)^2 + (U_i)^2}}{\sqrt{3}} + \left(1 - \frac{\sqrt{(1 - P_i)^2 + (1 - AFS_i)^2 + (1 - U_i)^2}}{\sqrt{3}} \right) \right]$$

Where i represents a given region and P_i , AFS_i , and U_i represent the bank penetration, availability of financial services and usage dimensions, respectively. Each dimension is calculated as $d_i = (weight_i) \frac{A_i - m_i}{M_i - m_i}$, where A_i is the actual value of the indicator and M_i and m_i , are the maximum and minimum values, respectively. Table 4 presents the dimensions, the corresponding indicators, and the weights applied to each indicator.

As in Sarma's (2012) IFI categorization, IFI values ranging from 0.6 to 1 are classified as high financial inclusion; 0.3 to 0.6 as medium financial inclusion; and under 0.3 as low financial inclusion. Note that the top IFI does not necessarily 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.

Tan

Table 4: Dimension, Indicators, and Weights Applied in the IFI Derivation

Dimension	Notation	Indicator	Weight
Bank penetration	P_i	Number of bank accounts per 10,000 adult population	1
Availability of financial services	AFS_i	<i>First Set</i>	
		Number of banks per 10,000 adult population	0.3
		Number of AFSPs per 10,000 adult population	0.2
		Number of banks per 1,000 square kilometer	0.3
		Number of AFSPs per 1,000 square kilometer	0.2
		<i>Second Set</i>	
		Number of banks per 10,000 adult population	0.3
		Number of AFSPs per 10,000 adult population	0.2
Usage	U_i	Bank branch per municipality/city	0.3
		AFSPs per municipality/city	0.2
Usage	U_i	Outstanding deposits as share of the region's GDP	0.5
		Outstanding loans as share of the region's GDP	0.5

Notes: (1) The data on adult (>15 years old) population is based on the 2010 census of population and population projections; (2) The data on the number banking offices include head offices, regular branches, microfinance-oriented branches, extension offices, micro-banking office (MBOs), and other banking offices (OBOs); (3) The indicator weight in the AFS dimension follows that of Sarma's (2012) which assigns 0.3 for banks and 0.2 for ATMs. However, in lieu of ATMs, this study employs AFSPs to broaden the set of financial institutions captured in the indicator. This is consistent with the Inclusive Finance Advocacy Staff's (IFAS) (BSP, 2014) report, which gives a higher weight banking indicators *since they offer a full range of financial service vis-à-vis* AFSPs. The NBSFI (2015) results also reveal that Filipinos are most aware of banks (98.3 percent) compared to other financial access points; (4) The indicators for the usage dimension include outstanding deposits/loans from universal and commercial, thrift, and rural and cooperative banks.

4.2 Optimal Points

The maximum values in the study are considered as “aspirational goals or goalposts,” which serve as reference for measuring financial inclusiveness. Following existing research works, the initial IFI utilizes the actual maximum and minimum values in the sample as the upper and lower bound, respectively. This study uses however, the 95th percentile of the observed upper limits for all indicators, except for the indicator on geographical penetration, which uses 90th percentile, for each year due to data specifications.⁹ Since the generated IFI values are relative to the existing financial conditions, a word of caution is in order in making time-series comparisons as the highest/lowest observed values vary periodically. The IFI values' prospective comparability across areas is also limited (Sarma, 2008 and 2012). To address these drawbacks, the second set of IFI uses pre-determined maximum values and sets the minimum value at zero. Fundamentally, the second set offers two analytical enhancements: (1) improved comparability across time, allowing policymakers to track the progress of financial inclusion initiatives; and (2) widely comparable IFI values that incorporate the country's financial targets. Table 5 shows the upper limits deemed as sound for each indicator based on related literature.

5. Presentation and Analysis of Results

The first set of IFI values (Annex B) provides a snapshot of the financial inclusiveness across the regions relative to existing financial conditions for the years 2011 and 2014. In 2011, only the NCR belonged to the high IFI category, while four regions, MIMAROPA, Eastern

Tan

Visayas, Zamboanga Peninsula, and ARMM, fell under the low IFI category. The remaining 12 regions were classified under the medium IFI category, with Central Luzon, Calabarzon, and Central Visayas positioned in the upper tier of the group. In 2014, the Central Visayas joined the NCR in the high IFI group, while the same four regions remained in the low IFI category. ARMM consistently registered the lowest in all dimensions in both years.

The average values for each dimension indicate that while the population is moderately banked and financial services are amply available, the usage remains subdued. This observation cuts across regions under different IFI categories. In the upper tier of the medium IFI group, Calabarzon scored high on the availability of banking services with a relatively banked population, but this has not translated to a higher utilization of financial services. The same goes for the Cordillera Administrative Region (CAR), another medium IFI region. MIMAROPA, a low IFI region with a relatively banked population and relative access to financial services, also has very limited utilization of financial services. The prevalence of “under-banked” regions partly indicates a mismatch between the existing financial services/products and the financial needs of the people in the various regions.

Evaluating first set of regional IFI against the national average illustrates that while the banked population for Calabarzon, CAR, and Davao Region are well above the national level, these regions’ usage are lower than the average, especially for Calabarzon and CAR.¹⁰ A similar divergent trend is apparent between availability of financial services and usage for Calabarzon, Ilocos, and Northern Mindanao. Table 6 shows that the highest correlation is between bank penetration and access to financial services, followed by bank penetration and usage, while usage and access to financial services registered the lowest. The latter is partly due to the cumbersome process and requirements necessary to open an account—more so for credit application.

Tan

Table 5: Maximum Values used in the Derivation of Indicators

Indicator	Maximum	Basis
Number of bank accounts per 10,000 adult population	10,000	Targets a 1:1 ratio between adult Filipinos and deposit accounts, in accordance to the Philippines' Maya Declaration commitment (IFAS, 2014)
Number of banks per 10,000 adult population	6	Follows Sarma's (2012) bank branch to client ratio of 1:1667
Number of AFSPs per 10,000 adult population	30	Following Sarma (2012), this study sets the ATM to bank ratio at two (2) to estimate the goalpost for AFSPs given the lack of information on this indicator in existing literature. In addition, it infers that for each bank there are three (3) corresponding AFSPs (one for each categorization: Savings, credit & other services, Credit & other services, and Payment, remittance & other services). Employing the target for the number of banks per 10,000 adult population puts the maximum value for this indicator at around 30.
Bank branch per municipality/city	6	Aligns with the 2011-2016 Philippine Development Plan target for nationwide bank branch/other banking offices density ratio. NEDA (2014)
AFSPs per municipality/city	30	See basis for the maximum value on the Number of AFSPs per 10,000 adult population, but use the bank branch per municipality/city target ratio for the country in lieu of the number of banks per 10,000 adult population.
Outstanding deposits as share of the region's GDP	1	According to Peachy and Roe (2006), full access is reached if the deposit to GDP ratio is 100 percent.
Outstanding loans as share of the region's GDP	0.85	While credit utilization is important, the system should be wary against overleveraging. Thus, a threshold of 85.0 percent, instead of 100, on household (HH) debt to GDP ratio is used. According to Cecchetti, et al. (2011), albeit the statistical imprecision on their HH sector estimates, debt ratio in excess of 85.0 percent becomes a drag to the economy and makes these households more vulnerable to shocks.

Tan

Table 6: Correlation between the Dimensions of Financial Inclusiveness

Dimensions	2011	2012	2013	2014
<i>IFI Values (First Set)</i>				
AFS and P	0.86	0.89	0.90	0.90
P and U	0.77	0.75	0.76	0.75
AFS and U	0.65	0.66	0.68	0.67
<i>IFI Values (Second Set)</i>				
AFS and P	0.83	0.85	0.85	0.85
P and U	0.82	0.81	0.79	0.77
AFS and U	0.77	0.76	0.77	0.77

Meanwhile, the second set of IFI values (Annex C) exhibits broadly consistent findings in terms of ranking, categorization, and identified high and low IFI regions, albeit with generally lower values.¹¹ The results also note the usage dimension's comparably low scores in all the years in review and across regions. This suggests that several regions are "under-banked" due weak credit availment from formal funding institutions and that there is a disconnect between the bank penetration and available financial services vis-à-vis actual usage (Table 7).¹² In 2011, NCR was the only high IFI region while seven regions, Cagayan Valley, MIMAROPA, Bicol, Eastern Visayas, Zamboanga Peninsula, SOCCSKSARGEN, and ARMM, were in the low IFI group. However, in 2014, the number of low IFI regions fell to just three: Eastern Visayas, Zamboanga Peninsula, and ARMM (Table 8). This development reflected the country's progress in advocating financial inclusiveness. Moreover, Calabarzon and Central Visayas inched closer to the high IFI category each year as they ranked steadily next to NCR.¹³ Over the past four years, Calabarzon displayed the highest increase in its banked population, while Central Visayas exhibited the biggest development in the availability of financial services and usage. The latter translated to the widest increase in IFI for Central Visayas compared to the other regions. Overall, the dimension on the availability of banking services had the biggest improvement from 0.377 in 2011 to 0.436 in 2014, while the lagging usage dimension only managed to improve marginally from 0.223 in 2011 to 0.252 in 2014.

Table 7: National Index of Financial Inclusiveness

Year	Dimensions of Financial Inclusiveness			
	P	AFS	U	IFI (Simple Ave)
2011	0.428	0.377	0.223	0.346
2012	0.426	0.411	0.225	0.358
2013	0.446	0.427	0.241	0.375
2014	0.456	0.436	0.252	0.384

Table 8: Performance of Low IFI Regions over the Years

Region		Category (2011, 2014)	Index of Financial Inclusion			
			2011	2012	2013	2014
II	Cagayan Valley	Low, Medium	0.298	0.313	0.332	0.349
XII	SOCCSKSARGEN	Low, Medium	0.284	0.318	0.329	0.342
V	Bicol	Low, Medium	0.260	0.279	0.302	0.318
IV-B	Mimaropa	Low, Medium	0.249	0.261	0.286	0.306
IX	Zamboanga Peninsula	Low, Low	0.251	0.263	0.281	0.289
VIII	Eastern Visayas	Low, Low	0.179	0.190	0.197	0.205
	ARMM	Low, Low	0.036	0.041	0.042	0.045

Tan

The higher IFI average value (weighted) of 0.384 (0.461) in 2014 from 0.346 (0.429) in 2011 reflects the improvement in the country's overall financial inclusiveness (Table 7 and Annex D). The disparity between weighted average and the simple average suggests that while there is higher financial inclusiveness on a per capita basis, there is more exclusion from a geographic viewpoint. This hints of a bias in favor of highly populated urbanized areas enabling the existing concentrated financial services to have a wider reach. Table 9 shows a quick correlation test between the calculated IFI values and selected macroeconomic variables. As with existing literature, regional financial inclusiveness in the Philippines is highly correlated with regional GDP, average household income, and level of urbanization. The region's income and level of financial inclusion moves in tandem, as regions with higher IFI values are associated with higher regional GDP and income, while those with low IFI values are associated with low-income regions. The high IFI region and those in the upper tier of the medium IFI category are located in Luzon (except for Central Visayas) the largest island and the center of economic and political activities in the Philippines. However, Central Visayas includes Cebu City, which is also considered as an economic powerhouse. A similar trend is observable with the level of urbanization, which is indicative of the concentration of financial service in the country's urban areas.¹⁴ Regions with higher IFI values are associated with areas where a higher proportion of population live in urban areas and the level of urbanization is comfortably higher than the national level.¹⁵

Table 9: Correlation Test between the IFI Values and Selected Macroeconomic Indicators

Variable	2011	2012	2013	2014
	<i>IFI Values (First Set)</i>			
Regional GDP	0.85	0.84	0.85	0.86
Average Household Income*				0.92
Level of Urbanization**				0.79
	<i>IFI Values (Second Set)</i>			
Regional GDP	0.92	0.92	0.91	0.90
Average Household Income*				0.91
Level of Urbanization**				0.86

* Based on the 2012 Family Income and Expenditure Survey (FIES).

** Based on the 2010 Census on Population and housing. The PSA 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.

6. Conclusion

The index of financial inclusion in the Philippines, derived from the average of all the regional indices, falls under the medium IFI category. The improvement in the overall IFI value and the decline in the number of low IFI regions indicate the advancement in the country's financial inclusiveness over the past four years. However, the results of the study also highlight the need to focus on improving the financial development in the regions consistently lagging behind in the past four years, namely, Eastern Visayas, Zamboanga Peninsula, and ARMM. While the lack of financial infrastructure is a familiar constraint in regions with lower IFI values, the more interesting finding is the notable extrication between the availability of financial services and its actual utilization. "Under-banked" regions are apparent across IFI categories, suggesting that banking transactions are usually limited to bank deposits and people are not taking full advantage of the available financial services

Tan

and transactions. A disaggregation of the usage dimension reveals that weak credit activity from formal sources drags down the value of the dimension. Thus, initiatives should be undertaken and efforts intensified to encourage active usage of financial services. This, in turn, will elevate the respective regions' and overall IFI.

Addressing supply side constraints include: (1) enhancing the institutional presence of formal fund providers, especially in regions with lower levels of urbanization; (2) simplifying the process in availing financial services from formal institution; and (3) developing innovative financial instruments that would better cater to the untapped segments (i.e., designing financial services and products that are adaptive to low and varying income stream). Concurrently, demand side initiatives, like financial literacy, is important in encouraging and easing the unbanked segment's apprehensions in transacting with financial institutions.

However, financial inclusion should be advanced prudently given its potential impact to the country's financial stability. While it enables banks to broaden their deposit-base by tapping informal-lending-dependent but productive segments of the economy and cross-sell new financial products, it could also lead to excessive and permissive credit extension by financial institutions to non-creditworthy clients (Nayak, 2014). This could result in overleveraging and pose serious threats to the economy—as in the case of the subprime mortgage crisis in the US. As such, it is crucial to strengthen regulatory institutions/frameworks/practices alongside the promotion of financial inclusion to balance the risks in the system.

In sum, this research sets the groundwork for a more comprehensive measure of financial inclusiveness in the future. As data become available, further research on the area could include more parameters to better capture the different dimensions—especially on usage—incorporate demand side information, and identify more established goalposts. Equally important are the valuable insights the study provides on the country's progress towards financial inclusiveness over the years, as well as the partial evaluation of the impact of recent policy initiatives. It also serves as guideposts to policymakers in drafting well-targeted and distinctive policies/strategies that will advance financial inclusion in all the regions in the country.

Endnotes

¹ As in Sarma (2012), Chattopadhyay (2011), Yorulmaz (2013).

² Kempson et al. (2004), as cited in Sarma (2008 and 2012), use “under-banked” or “marginally banked” to describe people with bank account(s) but uses the financial services offered marginally.

³ See also Sarma (2012) and Cámara and Tuesta (2014).

⁴ Only 32.7 percent save their money in banks.

⁵ According to Sarma (2012), ATMs now play a key role in the banking system and its contribution in improving access to banking services is evident, despite the varying services offered across banks and countries. The use of ATMs is no longer limited to deposit and withdrawal transactions, but also include bills payment, fund transfers, and cash advances, among others.

⁶ Chakravarty and Pal (2010) also apply the methodology to generate cross-country IFI, while Gupte et al., (2012) only provide time-series IFI values for India.

⁷ According to Chakravarty and Pal (2010), the “usage” information from credit-income ratio and deposit-income ratio pertains to two entirely different financial services.

⁸ AFSPs has three broad categories savings and credit (Non-stock savings and loan associations (NSSLAs), credit cooperatives, and microfinance NGOs), credit only (Non-bank financial institutions (NBFIs) and pawnshops), and payment, remittances, and other services (remittance agents, e-money agents, and moneychangers/foreign exchange (FX) dealers, and ATMs).

⁹ Yorulmaz (2013) uses the 97th quantile value as its upper limit. Sarma's (2012) upper limit corresponds to about the 90th percentile of the distribution for all indicators, except for the dimension on the ATM—approximately 92nd percentile.

¹⁰ National level is calculated as the simple average of the regional values.

¹¹ MIMAROPA, Bicol, SOCCSKSARGEN, and Central Visayas exhibit moderate differences.

¹² This finds support in NBSFI (BSP, 2015) results indicating that loan availments from banks account for only 4.4 percent of the 47.1 percent of Filipino adults that have availed of credit. Informal channels remain the predominant source of funding at 72 percent—61.9 percent from friends/relatives and 10.1 percent from informal lenders.

¹³ Consistent with IFAS' (2014) findings.

¹⁴ According to the case study by BSP and AFI (2014), the distribution of banking services is skewed highly to urbanized and populous regions. Similarly, NBSFI (BSP, 2015) results find that 55 percent of adults in urban areas have had banking transaction, much higher than the 45 percent in the rural areas.

¹⁵ Central Visayas registers 43.8, relatively close to the national level of urbanization (45.3).

References

- Amidžić, G, Massara, A & Mialou, A 2014, *Assessing countries' financial inclusion standing—a new composite index*, International Monetary Fund, no. 36, viewed 8 March 2016, <<http://www.imf.org/external/pubs/ft/wp/2014/wp1436.pdf>>
- Bangko Sentral ng Pilipinas (BSP) & Alliance for Financial Inclusion (AFI) Financial Inclusion Data Working Group 2014, *The use of financial inclusion data country case study: Philippines (policy on micro-deposits)*, Global Partnership for Financial Inclusion, viewed 20 December 2015, <http://www.gpfi.org/sites/default/files/documents/The%20Use%20of%20Financial%20Inclusion%20Data%20Country%20Case%20Study_Philippines.pdf>
- Bangko Sentral ng Pilipinas 2017, *2014 Consumer Finance Survey (CFS)*, viewed 10 February 2017, <http://www.bsp.gov.ph/downloads/Publications/2014/CFS_2014.pdf>
- Bangko Sentral ng Pilipinas 2016, *2011-2014 Status report on the state of financial inclusion in the Philippines*, viewed 29 January 2016, <<http://www.bsp.gov.ph/downloads/Publications/2012/Financial%20Inclusion.pdf>>
- Bangko Sentral ng Pilipinas 2015, *National Baseline Survey on Financial Inclusion (NBSFI)*, viewed 17 February 2016, <<http://www.bsp.gov.ph/downloads/publications/2015/NBSFIFullReport.pdf>>
- Beck, T and de la Torre, A 2006, *The basic analytics of access financial service*, World Bank Policy Research, no. 4026, viewed 20 December 2015, <<http://elibrary.worldbank.org/doi/pdf/10.1596/1813-9450-4026>>
- Cámara, N and Tuesta, D 2014, *Measuring financial inclusion: a multidimensional index*, BBVA Research, no. 26, viewed 8 March 2016, <https://www.bbva.com/wp-content/uploads/2014/09/WP14-26_Financial-Inclusion2.pdf>
- Cecchetti, S, Mohanty, MS & Zampolli, F 2011, *The real effects of debt*, Bank for International Settlements (BIS), no. 352, viewed 8 January 2016, <www.bis.org/publ/othp16.pdf>
- Chakravarty, S & Pal, R 2010, *Measuring financial inclusion: an axiomatic approach*, Indira Gandhi Institute of Development Research, no. 003, viewed 10 March 2016, <<http://www.igidr.ac.in/pdf/publication/WP-2010-003.pdf>>
- Chattopadhyay, SK 2011, *Financial inclusion in India: A case study of West Bengal* Munich Personal RePEc Archive, no. 34269, viewed 15 December 2015, <<http://ideas.repec.org/p/pra/mprapa/34269.html>>
- Conrad, A, Neuberger, D, & Schneider-Reißig, M 2008, *Geographic and demographic bank outreach: evidence from Germany's three-pillar banking system*, Thünen-series

- of Applied Economic Theory, no. 98, viewed 10 December 2015, <<http://ideas.repec.org/p/zbw/roswps/98.html>>
- Demirguc-Kunt, A Klapper, L Singer, D & Van Oudheusden, P 2015, *The global index database 2014: measuring financial inclusion around the world*, The World Bank, Policy Research Working Paper, no. 7255, viewed 10 December 2015, <http://www-wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2015/10/19/090224b08315413c/2_0/Rendered/PDF/The0Global0Fin0ion0around0the0world.pdf>
- Gupte, R, Venkataramani, B, and Gupta, D 2012, 'Computation of financial inclusion index for India', *Procedia- Science and Behavioral Sciences* 37, pp. 133 – 149, viewed 25 January 2016, <<http://www.sciencedirect.com/science/article/pii/S1877042812007604>>
- Kempson, E, Atkinson A, and Pilley, O. 2004, *Policy level response to financial exclusion in developed economies: lessons for developing economies*, Report of Personal Research Centre, University of Bristol, viewed 18 April 2016, <http://www.bristol.ac.uk/media-library/sites/geography/migrated/documents/pfrc0409.pdf>
- National Economic Development Authority (NEDA) 2011, *2011-2016 Philippine Development Plan (PDP)*, National Economic Development Authority, viewed 22 December 2015, <<http://devplan.neda.gov.ph/>>
- Nayak, A. 2014, *Benefits of Financial Inclusion to India*, India Microfinance, viewed 13 February 2017, <<http://indiamicrofinance.com/benefits-financial-inclusion-india.html>>
- Negrin, JL 2012, 'Building a financial inclusion index for Mexico', *presented at the Irving Fisher Committee Workshop on Financial Inclusion Indicators*, Kuala Lumpur, Malaysia, 6 – 12 November, viewed 12 February 2016, <<http://www.bis.org/ifc/publ/ifcb38s.pdf>>
- Peachy, S and Roe, A 2006, *Access to finance – what does it mean and how do savings banks foster access*, Oxford Policy Management, Perspectives No. 49, viewed 20 January 2016 http://www.ruralfinanceandinvestment.org/sites/default/files/1171453635609_Access_to_Finance_Savings_Banks.pdf
- Sarma, M 2008, *Index of financial inclusion*, Indian Council for Research on International Economic Relations, Working Paper no. 215, viewed 10 December 2015 <http://www.icrier.org/pdf/Working_Paper_215.pdf>
- Sarma, M 2012, *Index of financial inclusion- A measure of sector inclusiveness*, Berlin Working Papers on Money, Finance, Trade and Development, Working Paper no. 07, viewed 10 December 2015, <http://finance-and-trade.htw-berlin.de/fileadmin/working_paper_series/wp_07_2012_Sarma_Index-of-Financial-Inclusion.pdf>
- Taruc, P 2015, '69% of Filipinos have no bank accounts – study', *CNN Philippines*, viewed 10 January 2016, <<http://cnnphilippines.com/business/2015/04/17/majority-of-Filipinos-without-bank-accounts-study.html>>
- Yorulmaz, R 2013, 'Construction of a regional financial index in Turkey', *Journal of BRSA Banking and Financial Markets*, vol. 7, issue 1, pp. 79-101, viewed 8 January 2016, <http://www.bddk.org.tr/WebSitesi/turkce/Raporlar/BDDK_Dergi/12252makale4.pdf>
- World Bank 2014, *Global financial development report*, World Bank, viewed 8 January 2016 <<https://openknowledge.worldbank.org/bitstream/handle/10986/16238/9780821399859.pdf?sequence=4>>

Tan

Annex A

Regional Composition of the Philippines

Region	No. of Cities/ Municipalities	Provinces
National Capital Region (NCR)	17	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 (CAR)	77	Abra, Benguet, Ifugao, Kalinga Apayao, and Mountain Province
Region I – Ilocos Region	125	Ilocos Norte, Ilocos Sur, La Union, and Pangasinan
Region II – Cagayan Valley	93	Batanes, Cagayan, Isabela, Nueva Vizcaya, and Quirino
Region III – Central Luzon	130	Aurora, Tarlac, Pampanga, Zambales, Bataan, Nueva Ecija, and Bulacan
Region IV A – CALABARZON	142	Cavite, Laguna, Batangas, Rizal, and Quezon
Region IV-B MIMAROPA	73	Occidental Mindoro, Oriental Mindoro, Marinduque, Palawan, and Romblon
Region V – Bicol Region	114	Camarines Norte, Camarines Sur, Albay, Masbate, Sorsogon, and Catanduanes
Region VI – Western Visayas	133	Negros Occidental, Iloilo, Antique, Guimaras, Aklan and Capiz
Region VII – Central Visayas	132	Bohol, Cebu, Negros Oriental, and Siquijor
Region VIII – Eastern Visayas	143	Leyte, Southern Leyte, Biliran, Eastern Samar, Northern Samar, and Samar
Region IX – Zamboanga Peninsula	72	Zamboanga Sibugay, Zamboanga del Norte, Zamboanga del Sur, Zamboanga City (Zamboanga Peninsula), and Isabela City (Basilan Province)
Region X – Northern Mindanao	93	Bukidnon, Camiguin, Misamis Oriental, Misamis Occidental, and Lanao del Norte
Region XI – Davao Region	49	Davao City, Davao del Norte, Davao del Sur, Davao Oriental, and Compostela Valley
Region XII – SOCCSKSARGEN	50	North Cotabato, South Cotabato, Sultan Kudarat Province, Sarangani, and the cities of Cotabato, General Santos, Kidapawan, Koronadal, and Tacurong
Region XIII – Caraga	73	Agusan del Norte, Agusan del Sur, Surigao del Norte, and Surigao del Sur
Autonomous Region in Muslim Mindanao (ARMM)	118	Basilan, Lanao del Sur, Sulu and Tawi-Tawi, and Maguindanao Province

Note: In 2015, there was a newly created region—Negros Island Region (NIR). However, this region was excluded as the period under study is only until 2014 and data on NIR are yet to be generated.

Source: Department of Interior and Local Government and the Department of Economic Research (DER) 2014, Report on Regional Economic Developments, Bangko Sentral ng Pilipinas. www.bsp.gov.ph

Tan

Annex B

Index of Financial Inclusion for the Years 2011 and 2014 (Method 1: Snapshots; Descending Order)

2011						2014							
REGION		Dimension of Financial Inclusiveness				CATEGORY	REGION		Dimension of Financial Inclusiveness				CATEGORY
		P	AFS	U	IFI				P	AFS	U	IFI	
	NCR	1.000	1.000	1.000	1.000	High		NCR	1.000	1.000	1.000	1.000	High
VII-	Central Visayas	0.489	0.635	0.580	0.568	Medium	VII-	Central Visayas	0.542	0.642	0.653	0.612	Medium
IV-A	Calabarzon	0.566	0.893	0.239	0.558		IV-A	Calabarzon	0.665	0.897	0.222	0.582	
III-	Central Luzon	0.420	0.732	0.396	0.515		III-	Central Luzon	0.452	0.696	0.363	0.503	
I-	Ilocos	0.438	0.519	0.417	0.458			CARAGA	0.623	0.430	0.256	0.439	
	CAR	0.606	0.402	0.273	0.430		VI-	Western Visayas	0.413	0.406	0.469	0.430	
VI-	Western Visayas	0.381	0.416	0.488	0.429		XI-	Davao Region	0.484	0.430	0.333	0.416	
XIII-	CARAGA	0.405	0.386	0.440	0.410		I-	Ilocos	0.403	0.505	0.326	0.412	
XI-	Davao Region	0.443	0.411	0.368	0.408		II-	Cagayan Valley	0.365	0.391	0.447	0.401	
II-	Cagayan Valley	0.342	0.347	0.503	0.399		X-	Northern Mindanao	0.377	0.501	0.229	0.373	
X-	Northern Mindanao	0.402	0.466	0.248	0.374		XIII-	CARAGA	0.367	0.389	0.314	0.357	
V-	Bicol	0.275	0.274	0.465	0.341	V-	Bicol	0.317	0.320	0.384	0.341		
XII-	SOCCSKSARGEN	0.281	0.358	0.278	0.306	XII-	SOCCSKSARGEN	0.313	0.387	0.248	0.318		
IX-	Zamboanga Peninsula	0.300	0.289	0.288	0.293	Low	IV-B	Mimaropa	0.371	0.321	0.197	0.299	Low
IV-B	Mimaropa	0.321	0.301	0.201	0.276		IX-	Zamboanga Peninsula	0.322	0.291	0.265	0.293	
VIII-	Eastern Visayas	0.223	0.217	0.210	0.217		VIII-	Eastern Visayas	0.190	0.234	0.266	0.231	
	ARMM	0.000	0.000	0.000	0.000			ARMM	0.000	0.000	0.000	0.000	
Average		0.406	0.450	0.376	0.411		Average		0.424	0.461	0.351	0.412	
Weighted Average		0.479	0.576	0.441	0.498	Weighted Average		0.500	0.575	0.418	0.496		

Note: The relevant regions/variables with key developments/observations are in bold font.

Tan

Annex C.1

Index of Financial Inclusion for the Years 2011 and 2012 (Method 2: Comparative across years; Descending Order)

2011						2012							
REGION		Dimension of Financial Inclusiveness				CATEGORY	REGION		Dimension of Financial Inclusiveness				CATEGORY
		P	AFS	U	IFI				P	AFS	U	IFI	
	NCR	1.000	1.000	1.000	1.000	High		NCR	1.000	1.000	1.000	1.000	High
IV-A	Calabarzon	0.577	0.621	0.137	0.449	Medium	IV-A	Calabarzon	0.612	0.631	0.140	0.464	Medium
III-	Central Luzon	0.440	0.605	0.200	0.419		VII-	Central Visayas	0.515	0.520	0.285	0.441	
VII-	Central Visayas	0.505	0.459	0.283	0.417		XI-	Davao Region	0.474	0.597	0.193	0.425	
XI-	Davao Region	0.462	0.578	0.186	0.413		III-	Central Luzon	0.443	0.611	0.198	0.422	
VI-	Western Visayas	0.404	0.382	0.247	0.346		VI-	Western Visayas	0.405	0.414	0.244	0.356	
I-	Ilocos	0.457	0.336	0.214	0.339			CAR	0.607	0.238	0.162	0.348	
	CAR	0.613	0.206	0.151	0.338		I-	Ilocos	0.422	0.369	0.206	0.336	
X-	Northern Mindanao	0.424	0.335	0.137	0.305		X-	Northern Mindanao	0.407	0.392	0.144	0.320	
XIII-	CARAGA	0.426	0.265	0.206	0.303		XII-	SOCCSKSARGEN	0.323	0.458	0.155	0.318	
II-	Cagayan Valley	0.368	0.280	0.241	0.298		II-	Cagayan Valley	0.371	0.325	0.241	0.313	
XII-	SOCCSKSARGEN	0.310	0.385	0.142	0.284	XIII-	CARAGA	0.405	0.292	0.200	0.302		
V-	Bicol	0.305	0.250	0.222	0.260	V-	Bicol	0.311	0.310	0.212	0.279		
IX-	Zamboanga Peninsula	0.328	0.258	0.156	0.251	Low	IX-	Zamboanga Peninsula	0.329	0.294	0.156	0.263	Low
IV-B	Mimaropa	0.348	0.266	0.113	0.249		IV-B	Mimaropa	0.328	0.319	0.118	0.261	
VIII-	Eastern Visayas	0.257	0.151	0.120	0.179		VIII-	Eastern Visayas	0.238	0.186	0.140	0.190	
	ARMM	0.048	0.028	0.030	0.036			ARMM	0.052	0.034	0.035	0.041	
	Average	0.428	0.377	0.223	0.346			Average	0.426	0.411	0.225	0.358	
	Weighted Average	0.498	0.488	0.293	0.429		Weighted Average	0.499	0.514	0.292	0.438		

Note: The relevant regions/variables with key developments/observations are in bold font.

Tan

Annex C.2

Index of Financial Inclusion for the Years 2013 and 2014 (Method 2: Comparative across years; Descending Order)

2013						2014							
REGION		Dimension of Financial Inclusiveness				CATEGORY	REGION		Dimension of Financial Inclusiveness				CATEGORY
		P	AFS	U	IFI				P	AFS	U	IFI	
	NCR	1.000	1.000	1.000	1.000	High		NCR	1.000	1.000	1.000	1.000	High
IV-A	Calabarzon	0.671	0.639	0.154	0.489	Medium	VII-	Central Visayas	0.569	0.567	0.376	0.504	Medium
VII-	Central Visayas	0.553	0.556	0.356	0.488		IV-A	Calabarzon	0.687	0.641	0.164	0.498	
XI-	Davao Region	0.508	0.604	0.211	0.444		XI-	Davao Region	0.514	0.604	0.212	0.446	
III-	Central Luzon	0.466	0.612	0.218	0.435		III-	Central Luzon	0.483	0.614	0.233	0.446	
VI-	Western Visayas	0.432	0.439	0.282	0.386		VI-	Western Visayas	0.447	0.459	0.289	0.400	
	CAR	0.631	0.245	0.178	0.362			CAR	0.647	0.257	0.186	0.374	
I-	Ilocos	0.438	0.385	0.213	0.348		I-	Ilocos	0.437	0.400	0.218	0.355	
X-	Northern Mindanao	0.412	0.417	0.157	0.334		II-	Cagayan Valley	0.400	0.374	0.269	0.349	
II-	Cagayan Valley	0.396	0.349	0.246	0.332		XII-	SOCCSKSARGEN	0.351	0.488	0.168	0.342	
XII-	SOCCSKSARGEN	0.341	0.470	0.156	0.329		X-	Northern Mindanao	0.412	0.431	0.162	0.340	
XIII-	CARAGA	0.405	0.310	0.209	0.311		V-	Bicol	0.355	0.355	0.241	0.318	
V-	Bicol	0.336	0.341	0.224	0.302		XIII-	CARAGA	0.402	0.321	0.208	0.313	
IV-B	Mimaropa	0.371	0.335	0.136	0.286	IV-B	Mimaropa	0.406	0.349	0.145	0.306		
IX-	Zamboanga Peninsula	0.345	0.318	0.172	0.281	IX-	Zamboanga Peninsula	0.360	0.315	0.183	0.289	Low	
VIII-	Eastern Visayas	0.234	0.201	0.154	0.197	VIII-	Eastern Visayas	0.234	0.198	0.183	0.205		
	ARMM	0.050	0.038	0.038	0.042		ARMM	0.052	0.038	0.045	0.045		
Average		0.446	0.427	0.241	0.375	Average		0.456	0.436	0.252	0.384		
Weighted Average		0.520	0.526	0.308	0.454	Weighted Average		0.528	0.531	0.317	0.461		

Note: The relevant regions/variables with key developments/observations are in bold font.

Tan

Annex D

Summary of the Regional Index of Financial Inclusion, 2011 – 2014 (Method 2)

Region		Overall Index of Financial Inclusion			
		2011	2012	2013	2014
	NCR	1.000	1.000	1.000	1.000
	CAR	0.338	0.348	0.362	0.374
I-	Ilocos	0.339	0.336	0.348	0.355
II-	Cagayan Valley	0.298	0.313	0.332	0.349
III-	Central Luzon	0.419	0.422	0.435	0.446
IV-A	Calabarzon	0.449	0.464	0.489	0.498
IV-B	Mimaropa	0.249	0.261	0.286	0.306
V-	Bicol	0.260	0.279	0.302	0.318
VI-	Western Visayas	0.346	0.356	0.386	0.400
VII-	Central Visayas	0.417	0.441	0.488	0.504
VIII-	Eastern Visayas	0.179	0.190	0.197	0.205
IX-	Zamboanga Peninsula	0.251	0.263	0.281	0.289
X-	Northern Mindanao	0.305	0.320	0.334	0.340
XI-	Davao Region	0.413	0.425	0.444	0.446
XII-	SOCCKSARGEN	0.284	0.318	0.329	0.342
XIII-	CARAGA	0.303	0.302	0.311	0.313
	ARMM	0.036	0.041	0.042	0.045
	<i>Average</i>	0.346	0.358	0.375	0.384
	<i>Weighted Average</i>	0.429	0.438	0.454	0.461

Note: The relevant regions/variables with key developments/observations are in bold font.