BOFIT Policy Brief
2014 No. 8

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A view on financial inclusion in Asian countries

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Bank of Finland, BOFIT
Institute for Economies in Transition

BOFIT Policy Brief
Editor-in-Chief Iikka Korhonen

BOFIT Policy Brief 8/2014

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14.7.2014
ISSN 2342-205X (online)

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A view on financial inclusion in Asian countries

Abstract

Financial inclusion contributes to economic growth and poverty reduction. We examine financial inclusion levels in twelve Asian countries. To do so, we utilize data from the World Bank Global Findex database for 2011. We find large cross-country differences for the three main indicators of financial inclusion (ownership of a bank account, savings on a bank account, use of bank credit) and observe that ownership of a bank account is more common in high-income countries. However, the pattern of financial inclusion in terms of saving on a bank account or using formal credit differs across countries and is not related to per capita income. There are nonetheless major similarities in the motives for financial exclusion and in the alternative sources of borrowing in Asian countries. Voluntary financial exclusion is more prominent than involuntary exclusion, the main reason being lack of money. We also find that borrowing from family or friends is the most common way of obtaining credit and that relying on alternative private lenders is quite limited.

Keywords: financial inclusion, financial institutions, Asia

JEL Codes: G21, O16, P34

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We are grateful to Lim Kim Hwa, Juuso Kaaresvirta, Iikka Korhonen, Zhichao Zhang and the participants of the Asian Economic Panel in Helsinki (June 2014) for providing valuable comments.

I. Introduction

Financial inclusion, defined as the use of formal financial services, is one of the major determinants of economic development. Being financially included allows individuals to relax constraints associated with investment in education and with launching a business. Financial inclusion thus fosters growth and reduces poverty (Beck, Demirgüc-Kunt and Levine, 2007; Bruhn and Love, 2014). It permits individuals to save money and so reduce uncertainty of income, but it also contributes to financial stability, as more frequent use of bank deposits creates a more stable deposit base for banks in troubled times (Han and Melecky, 2013).

There is an increasing number of papers which have recently examined financial inclusion following publication of the World Bank's Global Findex database. This dataset contains financial inclusion indicators for 2011 for 148 countries. Demirgüc-Kunt and Klapper (2013) investigate the use of financial services for all countries by focusing on the three main indicators of financial inclusion: ownership of a bank account, savings on a bank account, use of bank credit. Allen et al. (2012) examine the individual and country characteristics that determine the ownership of a bank account and saving on a bank account for 123 countries. Fungáčová and Weill (2014) analyze financial inclusion in China and compare it with the other BRICS countries.

Our aim in this paper is to examine financial inclusion in twelve Asian countries: China, Hong Kong, India, Indonesia, Japan, South Korea, Malaysia, Philippines, Singapore, Thailand, Taiwan, and Vietnam. This region of the world is characterized by impressive economic growth in the majority of the countries in the last decades. Nevertheless, there are still major cross-country differences in economic development. While Japan and Singapore are among the richest countries in the world, Philippines and Vietnam are classified as lower-middle income countries by the World Bank. We investigate the extent to which these countries differ in financial inclusion and whether financial exclusion could be a constraint on economic growth in some Asian countries.

Furthermore, it is of particular importance to document the motives related to financial exclusion. Such information is crucial for formulating and implementing suitable policies to foster financial inclusion. Namely, financial exclusion can be determined by motives associated with voluntary exclusion such as lack of money or involuntary exclusion related to characteristics of the banking industry such as excessive charges or lack of documentation. The motives associated with involuntary exclusion help identify barriers to financial inclusion that can be reduced by means of suitable policies.

We also examine the sources of borrowing in Asian countries. In addition to formal credit, individuals can rely on informal sources of borrowing to finance their needs. Evidence from China indicates that constrained access to credit for SMEs and individuals contributes to greater reliance on alternative sources of borrowing (Geng and N'Diaye, 2012). These sources include borrowing from relatives or friends, but also from informal lenders. The development of alternative sources of borrowing can contribute to the expansion of shadow banking, which can reduce the effectiveness of banking regulation and pose a threat to financial stability. We investigate the relative weight of different sources of borrowing so as to examine the potential importance of informal finance in the different Asian countries.

The remainder of the paper is structured as follows. Section 2 presents the data. Section 3 provides an analysis of the main indicators of financial inclusion. Section 4 develops the motives for financial exclusion. Section 5 presents the information on the alternative sources of borrowing. Section 6 concludes.

II. Data

We investigate financial inclusion in 12 Asian countries. Our sample of countries includes countries from the same geographic region, which naturally differ in various ways, including economic development.

The data are from the World Bank's Global Findex database, which includes individual level data originating from a survey of more than 150,000 adults in 148 countries in 2011. This database is only available for this year. The Global Findex questionnaire provides detailed information on financial inclusion. It contains a large set of questions on the use and motives for use of financial services. The survey was conducted by Gallup, Inc., in association with its annual Gallup World Poll. Since 2005, Gallup has surveyed about 1,000 people yearly in each of the countries. However the sample can be larger for large countries. Thus our dataset includes 4,220 individuals for China, 3,518 for India, and about 1,000 for each of the other ten countries. The target population is the entire civilian, noninstitutionalized population aged at least 15. Additional information on this database can be found in Demirgüc-Kunt and Klapper (2012).[3]

III. Main indicators of financial inclusion

We document the level of financial inclusion in Asian countries. In this study, we measure financial inclusion from several different perspectives. Following Demirgüc-Kunt and Klapper (2013), we use three main indicators. The first and most traditional one is the ownership of an account in a formal financial institution (*Formal Account*). It is determined via the survey question: Do you currently have a bank account at a formal financial institution? This indicator represents the broader form of financial inclusion: a formal account serves as an entry key to the banking industry because it enables the individual to open a savings account and to apply for a loan.

The second indicator is based on saving behavior in a formal financial institution (*Formal Saving*). The survey question used in this case is: Have you saved money using an account at a bank, credit union or microfinance institution in the past 12 months? This question only concerns those who answered yes to the question asking if they saved money in the past 12 months at all, so that the number of respondents is less than for the first indicator. This measure provides information on the willingness of savers to save money in a formal financial institution as compared to alternative forms of saving.

The third indicator of financial inclusion considers the usage of bank credit (*Formal Credit*). The question here aims to determine whether the individual has a bank loan: Have you borrowed any money from a financial institution (bank, credit union or microfinance institution) in the past 12 months?

Table 1 presents the main statistics for these three indicators for all the countries. It should be noted that the number of respondents is not the same for each indicator.

As regards formal account, we observe major differences across countries: while 98.7 percent of individuals in Singapore have an account at a formal financial institution, only about 23 percent of Vietnamese and Indonesian individuals have one. Demirgüc-Kunt and Klapper (2013) point out that half of the world's adult population still does not have a formal account. Taking into account the world average, we can classify Asian countries in three groups: those with high financial

[3] The Global Findex database is freely available on the World Bank website: http://datatopics.worldbank.org/financialinclusion/.

inclusion (Hong Kong, Japan, Korea, Singapore), with means between 89.3 and 98.7 percent; those with average financial inclusion (China, Malaysia, Taiwan, Thailand), with means ranging from 66.3 to 76.6 percent; and those with low financial inclusion (India, Indonesia, Philippines, Vietnam) with means between 23 and 37.3 percent.

Cross-country differences in formal account can be interpreted by accounting for the country's level of economic development. Demirgüc-Kunt and Klapper (2013) argue that GDP per capita plays a major role in explaining cross-country differences in the use of formal account. They find wide discrepancies in formal accounts use between high-income and low-income countries. Overall our analysis of financial inclusion levels is clearly in line with this view: all the countries in the high financial inclusion group are high-income countries, while all those in the low financial inclusion group are middle-income or lower-income countries (Figure 1). However there are some interesting exceptions in the relation between income per capita and use of formal account: GDP per capita in Taiwan is much higher than in Thailand (20,101 USD vs. 5,395 USD for 2011 according to IMF), but their use of formal accounts is very similar (73.7 vs 76.6 percent).

In terms of formal saving, we observe again wide cross-country differences. On average, 96.2 percent of Singaporean individuals who have saved in the past 12 months have saved at a financial institution, but only 29.4 percent of such Vietnamese individuals have done so. Interestingly, all the countries score higher than the world average of 22 percent (Demirgüc-Kunt and Klapper, 2013). This observation suggests that Asian countries are characterized by high formal saving. Many studies have examined the high savings rate in China (e.g. Yang, 2012), so it is of interest to point out a more general observation of high levels of formal saving in Asian countries, which is in line with the analysis by Horioko and Terada-Hagiwara (2011).

Even though the countries at both extremes are similar in terms of the first two measures of financial inclusion, the comparison between formal account and formal saving does not reveal the same ranking across countries. This difference stresses the fact that per capita income does not play the same role in explaining cross-country differences in formal saving and formal account.

We provide more details concerning this observation by looking at figures on general saving behavior, as we also have such data. We compare these figures with those on formal saving to see whether the same factors influence both formal saving and general saving.

In particular this comparison allows us to examine the potential role of banking factors vs. the other factors because banking characteristics such as trust in banks influence formal saving but not general saving behavior. On the other hand, other factors, e.g. demographic factors or precautionary saving motives, are expected to have the same effect on formal saving and general saving.

We present the figures on general saving behavior in Table 2. This indicator is based on the survey question: Have you saved or set aside any money in the past 12 months? We again observe large discrepancies across Asian countries, but the conclusions differ for general saving and for formal saving. Interestingly six countries with various levels of GDP per capita have very similar levels of general saving, while they are clearly different in terms of formal saving: Hong Kong, Japan, Korea, Singapore, Thailand, and Taiwan. For all these countries, the percentage of individuals having saved during the last 12 months is relatively high, ranging from 60.8 percent to 65.6 percent.

Moreover cross-country differences are smaller for general saving than for formal saving. India is a notable exception, with only 27.7 percent of individuals saving in the last 12 months, as the next country in the line-up is China, with 43.4 percent. The country with the highest general saving is Singapore (65.6 percent). These figures have to be put into perspective with the range between 29.4 percent and 96.2 percent observed for formal saving.

All in all, this comparison of formal saving and general saving suggests that formal saving is mainly affected by factors other than GDP per capita. We can notably suppose that demographic factors or precautionary saving motives contribute to formal saving, as suggested by the literature on the determinants of saving (e.g. Masson, Bayoumi and Samiei, 1998).

In terms of formal credit, which is the third alternative measure of financial inclusion, we observe low use for most countries. The number of individuals who report having obtained a formal credit in the past year ranges from 6.5 percent in China to 18.5 percent in Thailand. This observation does not significantly differ from what is observed in the rest of the world. The average for high-income countries is 14 percent.

The most striking finding is however that no relation is observed between the use of formal credit and the level of economic development (Figure 2). In spite of their high levels of GDP per capita, Hong Kong and Japan are, after China, the countries with the lowest use of formal credit in our sample (respectively 6.9 percent and 7.1 percent). This observation points to the influence of other factors on the use of formal credit. The case of China illustrates well the impact of two complementary factors: the fact that formal credit is directed to large state-owned firms (Hale and Long, 2010; Geng and N'Diaye, 2012, Herrala and Jia, 2015) leading to limited access to bank credit for individuals, and the use of informal modes of financing. In the case of Japan, it is of interest to point out the wide use of credit cards. Namely, the share of respondents having a credit card in the survey is by far the highest in our sample in Japan (71.2 percent) while the average share stands at 21.4 percent. This observation indicates that the low use of formal credit in Japan can be explained by relying more on credit cards.

Furthermore we compare the figures for the use of formal credit with the importance of domestic credit in general, which also serves as an indicator of the level of financial development in a given country. Global Financial Development Database (Cihak et al., 2012) provides information on the ratio of bank private credit to GDP for all countries of our sample, with the exception of Taiwan. An analysis of the figures for 2011 reveals the existence of two main groups of countries in our sample. On the one hand, there are countries with relatively low values: India, Indonesia, and Philippines. In the second group there are all other countries, for which the ratio of domestic credit to GDP ranges between 98.43 percent (Korea) and 121.49 percent (China). The level of domestic credit in these countries is comparable to what is observed in developed countries such as France (113.60 percent) or Germany (103.82 percent). In addition, we would stress the specific case of Hong Kong, with a very high value (186.24 percent).

Demirgüc-Kunt and Klapper (2013) observe a positive relationship between this indicator of financial development and the use of formal credit in their worldwide analysis of financial inclusion. However we do not find the same result for Asian countries. Notably the three countries with the lowest use of formal credit (China, Hong Kong, and Japan) each has a high ratio of bank private credit to GDP.

IV. Motives for financial exclusion

We examine the motives for financial exclusion in this section. In the survey individuals are asked to provide reasons for their decision not to have a formal account. The survey includes seven possible reasons for such behavior and allows multiple answers. The reasons considered are: "too far away", "too expensive", "lack of documentation", "lack of trust", "lack of money", "religious reasons", "family member has one".

Unfortunately, the database only includes a very limited number of respondents for the five high-income countries included in our sample (Hong Kong, Japan, Korea, Singapore, and Taiwan) as the majority of the population there has a formal account. That is why we only perform further analysis for the seven other countries.

Allen et al. (2012) point out that some of these answers can be considered voluntary exclusion ("lack of money", "religious reasons", "family member has one") while the others are associated with involuntary exclusion ("too far away", "too expensive", "lack of documentation", "lack of trust"). The distinction between voluntary and involuntary exclusion is of prime importance for policy implications, as involuntary exclusion stresses the presence of obstacles to financial inclusion, which can be dismantled by implementing the right policy.

Tables 3 and 4 provide the main statistics for the different barriers to financial inclusion reported in the survey, respectively for those associated with involuntary exclusion and with voluntary exclusion.

Lack of money is the most common reason for not having a formal account in all countries. The percentage of individuals without a formal account citing this reason for not having one ranges from 56.6 percent in Thailand to 83.9 percent in Indonesia. This observation accords with the finding of Allen et al. (2012) that it is the most often cited motive for financial exclusion in the world. Individuals without sufficient cash earnings do not benefit enough to bear the overall cost of having a bank account. Asian countries are not an exception in this respect.

We observe very different patterns across Asian countries for all other motives. The fact that another family member has an account is an important reason in Philippines (27.4 percent), Malaysia (31.8 percent), China (34.3 percent), India (44.5 percent), and especially in Thailand (48 percent). But it is not often reported in Vietnam (14.4 percent) and particular in Indonesia (9.7 percent).

The last motive associated with voluntary exclusion, "religious reasons", is overall less important. It is reported by less than 2 percent of individuals in most countries with two exceptions: India (7.9 percent) and Philippines (7.1 percent). We can explain the situation in these countries by the presence of Muslim minorities associated with the absence of Islamic banks. As Islam prohibits interest, Muslims might be reluctant to have a formal account in other than Islamic banks. Hence their financial inclusion is influenced by the presence of financial institutions in line with the principles of Islam.

As regards the motives related to involuntary exclusion, we again note the large cross-country differences. The cost of having a formal account ("too expensive") plays a major role in Indonesia and in Philippines, as 43.3 percent and 49.8 percent respectively report this reason. The situation is totally different in the other countries. Less than 10 percent of individuals report this reason in China, Thailand, and in Vietnam, while Indian and Malaysian individuals are in the middle (24.3 percent and 16.7 percent).

Similarly the impact of documentation requirements ("lack of documentation") widely differs across countries. About 40 percent of individuals in Malaysia and in Philippines cite this reason, but only less than 3 percent in Thailand.

Proximity to the bank matters, as "too far away" is cited by more than 10 percent of individuals in all countries. It matters especially in Indonesia (36.1 percent) and in Philippines (30.7 percent), and the least in Vietnam (11.7 percent). These figures may be related to the presence of bank branches as measured by the Global Financial Development Database (Cihak et al., 2012). This dataset provides information on the number of bank branches per 100,000 adults for all countries of the sample with the exception of China and Taiwan. We observe that Vietnam has the lowest presence of bank branches (3.63), followed in increasing order by Philippines (8.07) and Indonesia (8.52). In comparison, this indicator is higher than 10 for all other countries and reaches 33.98 for Japan. Therefore proximity to the bank as a motive for financial exclusion may be related the presence of bank branches.

Trust in banks ("lack of trust") has a limited influence in all the countries. The highest percentage of individuals reporting this reason can be found in Vietnam (12.5 percent) and the Philippines (13.4 percent). Here again Thailand has the lowest percentage (3.2 percent).

Overall the analysis of motives for financial exclusion shows that voluntary exclusion motives dominate in all the Asian countries. The answers cited by individuals provide information on how individuals view the banking industry in their country. The involuntary reasons associated with the price of having an account, document related to the account, distance to the bank, and trust in banks are frequently cited in Indonesia and the Philippines, and to a lesser degree in Malaysia and Vietnam. This observation means that banking-industry characteristics contribute to lower financial inclusion in these countries. On the other hand, individuals in China, India, and Thailand do not report high importance of these motives.

These results suggest different policy implications to enhance financial inclusion. In countries where involuntary exclusion motives play a major role, policymakers could improve the characteristics of the banking industry through greater competition, better transparency, and a growing network of bank branches. To reduce voluntary exclusion, financial exclusion is particularly dependent on the level of economic development, as a lack of money is the driving force in this case.

V. Alternative sources of borrowing

Formal credit is not the only source of borrowing for individuals. They can also rely on informal sources of financing. This issue is of interest when evaluating access to credit, which is a major concern in many emerging countries, as it significantly influences economic growth. Moreover, it can facilitate the development of a shadow banking system, which can hamper financial stability, as such a system dilutes the effectiveness of banking regulation.

Our dataset enables us to measure the importance of sources of borrowing other than formal credit. We have seen above that 10 percent of individuals in Asian countries on average have obtained a formal credit in the last 12 months, with lower proportions of around 7 percent for China, Hong Kong, and Japan. Does this indicate that individuals rely more on alternative ways of borrowing in comparison to formal credit?

In addition to the use of formal credit, we have information on different alternative sources of borrowing: "borrowed money from a store", "borrowed money from family or friends", "borrowed money from employer", "borrowed money from another private lender". These represent five different sources of financing for individuals, which we aggregate to produce information on all borrowings in the last 12 months. Tables 5 and 6 give the statistics for the alternative sources of borrowing.

We start by looking at how much on average individuals have borrowed altogether within the last 12 months. We observe considerable differences across countries in our sample. Japan constitutes the lower bound with only 17.9 percent and is by far the country in which borrowing in general is the least common[4]. At the upper bound, three countries have proportions of individuals greater than 40 percent: Vietnam (42.5 percent), Indonesia (49.9 percent), and Philippines (55.8 percent). These figures suggest that the use of borrowing differs widely across Asian countries. Overall, our comparison of proportions of individuals having borrowed via formal credit and having borrowed at all clearly shows that informal credit is far more common than formal credit in all of these countries.

We examine the importance of different alternative sources of borrowing. The most important way to borrow money in the majority of countries is through family or friends. A notable exception is again Japan with only 3.6 percent having used this source. Japan is therefore characterized by the

[4] As mentioned before this is most likely the consequence of high reliance on credit cards in Japan.

lower use of formal credit and less borrowing through family or friends in our sample of countries. The other countries in which this source of borrowing does not exceed formal credit are Thailand and Taiwan in which the proportion of individuals having used this source is less than 10 percent. We again observe that the countries relying most on borrowing through family or friends are the ones using formal credit the most: Indonesia (42.4 percent), Philippines (36.1 percent), and Vietnam (31.5 percent).

All in all, the similarities found in the ranking of countries for the use of formal credit and of borrowing through family or friends support the view that there is no substitution between sources of borrowing, but rather that cross-country differences are visible in the use of borrowing as a whole.

Borrowing from a store is not common in China, Indonesia, or Thailand (less than 3 percent). However it exceeds 10 percent in most other countries and is actually used by 23.1 percent of individuals in Philippines.

The other sources of borrowing included in the survey are much less commonly used. Borrowing money from the employer and borrowing from another private lender are respectively used on average by 2.9 percent and 3.1 percent of individuals. Interestingly, we again observe that the greatest use of these sources can be observed in Philippines (10.8 percent and 13.1 percent respectively).

Overall we observe some similarities in the pattern of sources of borrowing for all Asian countries, with the dominant role of borrowing through family or friends and of formal credit. Nevertheless there are major cross-country differences in the importance of the use of borrowing sources. These findings provide evidence on sources of informal finance in Asia: individuals do not frequently rely on alternative private lenders but prefer resorting to personal relations.

VI. Conclusion

We examine financial inclusion in Asian countries based on the Global Findex Database. Financial inclusion is a major issue owing to its implications for growth in having a significant impact on the level of education and entrepreneurship. We find major similarities and differences in financial inclusion across Asian countries.

The main differences relate to the levels of financial inclusion measured by the three main indicators. First, ownership of a bank account varies considerably across countries. We observe the major influence of GDP per capita for this key measure of financial inclusion. Second, saving on a bank account also differs widely across Asian countries. The pattern in this case is however not determined by GDP per capita and suggests the influence of other factors for the saving behavior in general. Third, the use of bank credit is very diverse across Asian countries. We interestingly observe the lowest levels of use of bank credit for China, Hong Kong and Japan, which also suggests the absence of a relation between level of economic development and formal credit.

The main similarities concern the motives for financial exclusion and the alternative sources of borrowing. Regarding the motives for financial exclusion, we observe in all the countries that a lack of money is the most often cited reason. More generally, motives related to voluntary exclusion are the main reasons for not having a formal account. The analysis of the alternative sources of borrowing reveals that formal credit is overwhelmed by informal credit in all the countries. Borrowing money through family or friends is the most common choice. Other ways of borrowing can also be used but they are used less and the usage differs across countries. Overall our findings do not support the view of a large fraction of individuals relying on alternative private lenders in Asian countries, which tends to limit the development of shadow banking.

In terms of policy implications, we observe that financial inclusion, as measured by the ownership of a formal account, may constitute an obstacle to growth in a limited number of countries. Policymakers can contribute to the reduction of involuntary exclusion in these countries by supporting competition, transparency and the development of networks in the banking industry, so as to reduce the obstacles to financial inclusion.

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Table 1
Main indicators for financial inclusion

This table displays the descriptive statistics for the three main financial inclusion indicators. Formal Account refers to adults reported to currently have a bank account at a formal financial institution. Formal Saving refers to adults reported to have saved or set aside money in the past 12 months using a financial institution. Formal Credit refers to adults reported to have borrowed money in the past 12 months using a financial institution. The data on world average come from Demirgüc-Kunt and Klapper (2012).

	Formal account			Formal saving			Formal credit		
	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.
China	4184	0.663	0.473	1799	0.819	0.385	4195	0.065	0.247
Hong Kong	1023	0.893	0.309	617	0.707	0.456	1024	0.069	0.254
India	3501	0.373	0.484	947	0.565	0.496	3460	0.081	0.273
Indonesia	997	0.230	0.421	439	0.442	0.497	998	0.110	0.313
Japan	993	0.970	0.171	639	0.842	0.365	994	0.071	0.258
Korea	997	0.900	0.301	630	0.743	0.437	996	0.160	0.366
Malaysia	985	0.710	0.454	513	0.723	0.448	995	0.117	0.321
Philippines	994	0.266	0.442	452	0.361	0.481	998	0.110	0.313
Singapore	1000	0.987	0.113	654	0.962	0.192	1000	0.116	0.320
Thailand	999	0.737	0.441	628	0.726	0.446	995	0.185	0.388
Taiwan	981	0.766	0.424	625	0.760	0.427	995	0.108	0.310
Vietnam	983	0.232	0.422	371	0.294	0.456	919	0.161	0.368
Total	17637	0.609	0.488	8314	0.703	0.457	17569	0.099	0.299
World average		0.50			0.22			0.09	

Table 2
Indicators for general saving behavior

This table displays the descriptive statistics for the general saving indicator. General Saving refers to adults reported to have saved or set aside money in the past 12 months. The data on world average come from Demirgüc-Kunt and Klapper (2013).

	General saving		
	Obs.	Mean	St.dev.
China	4170	0.434	0.496
Hong Kong	1020	0.608	0.488
India	3458	0.277	0.448
Indonesia	997	0.440	0.497
Japan	3458	0.277	0.448
Korea	975	0.655	0.475
Malaysia	992	0.640	0.480
Philippines	982	0.535	0.499
Singapore	998	0.453	0.498
Thailand	997	0.656	0.475
Taiwan	994	0.632	0.483
Vietnam	988	0.641	0.480
Total	17481	0.436	0.496
World average		0.36	

Table 3
Barriers to financial inclusion: involuntary exclusion (1/2)

This table displays the descriptive statistics for barriers to financial inclusion related to involuntary exclusion. The data on world average come from Demirgüc-Kunt and Klapper (2012).

Reason for not having a formal account	too far away			too expensive			lack of documentation			lack of trust		
	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.
China	1124	0.163	0.369	1099	0.098	0.298	1124	0.088	0.284	1126	0.054	0.226
India	1992	0.232	0.422	1987	0.243	0.429	1966	0.170	0.376	1968	0.087	0.282
Indonesia	760	0.361	0.480	737	0.433	0.496	757	0.269	0.444	750	0.095	0.293
Malaysia	273	0.238	0.427	264	0.167	0.373	268	0.381	0.486	259	0.042	0.202
Philippines	685	0.307	0.461	679	0.498	0.500	687	0.408	0.492	686	0.134	0.341
Thailand	248	0.141	0.349	248	0.085	0.279	259	0.027	0.162	253	0.032	0.175
Vietnam	660	0.117	0.321	625	0.086	0.281	672	0.146	0.353	608	0.125	0.331
Total	5742	0.223	0.404	5639	0.230	0.380	5733	0.213	0.371	5650	0.081	0.264
World average		0.2			0.25			0.18			0.13	

Table 4
Barriers to financial inclusion: voluntary exclusion (2/2)

This table displays the descriptive statistics for barriers to financial inclusion related to voluntary exclusion. The data on world average come from Demirgüc-Kunt and Klapper (2012).

Reason for not having a formal account	lack of money			religious reasons			family member has an account		
China	1127	0.606	0.489	1132	0.010	0.098	1120	0.343	0.475
India	2005	0.626	0.484	1981	0.079	0.270	1990	0.445	0.497
Indonesia	758	0.839	0.368	757	0.018	0.135	755	0.097	0.296
Malaysia	267	0.584	0.494	271	0.004	0.061	258	0.318	0.467
Philippines	689	0.797	0.403	686	0.071	0.258	686	0.274	0.446
Thailand	256	0.566	0.497	259	0.012	0.107	254	0.480	0.501
Vietnam	633	0.569	0.496	651	0.014	0.117	655	0.144	0.351
Total	5735	0.655	0.461	5737	0.030	0.149	5718	0.300	0.433
World average		0.66			0.05			0.23	

Table 5
Alternative sources of borrowing (1/2)

This table displays the descriptive statistics for variables describing alternative (other than formal) credit sources of borrowing.

Borrowed from		a store			family and friends			employer	
	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.
China	4202	0.030	0.171	4196	0.210	0.408	4193	0.014	0.117
Hong Kong	1025	0.132	0.338	1021	0.141	0.348	1024	0.008	0.088
India	3461	0.067	0.250	3454	0.190	0.392	3459	0.050	0.219
Indonesia	998	0.029	0.168	999	0.424	0.495	998	0.039	0.194
Japan	995	0.111	0.314	995	0.036	0.187	995	0.000	0.000
Korea	996	0.122	0.328	994	0.167	0.373	997	0.010	0.100
Malaysia	982	0.076	0.266	995	0.159	0.366	995	0.042	0.201
Philippines	998	0.231	0.422	998	0.361	0.480	997	0.108	0.311
Singapore	1000	0.142	0.349	1000	0.118	0.323	1000	0.004	0.063
Thailand	997	0.012	0.109	997	0.085	0.279	996	0.010	0.100
Taiwan	995	0.128	0.334	995	0.065	0.247	997	0.014	0.118
Vietnam	965	0.133	0.339	959	0.315	0.465	961	0.036	0.187
Total	17614	0.083	0.276	17603	0.193	0.395	17612	0.029	0.166

Table 6
Alternative sources of borrowing (2/2)

This table displays the descriptive statistics for variables describing alternative (other than formal) credit sources of borrowing.

Borrowed from	another private lender			formal financial institution			any credit		
	Obs.	Mean	St.dev.	Obs.	Mean	St.dev.	Obs.	Mean	Std.dev
China	4192	0.011	0.103	4195	0.065	0.247	4220	0.257	0.437
Hong Kong	1023	0.019	0.135	1024	0.069	0.254	1028	0.276	0.447
India	3460	0.066	0.248	3460	0.081	0.273	3518	0.294	0.456
Indonesia	998	0.017	0.129	998	0.110	0.313	1000	0.499	0.500
Japan	993	0.004	0.063	994	0.071	0.258	1000	0.179	0.384
Korea	999	0.005	0.071	996	0.160	0.366	1001	0.316	0.465
Malaysia	994	0.019	0.137	995	0.117	0.321	1000	0.297	0.457
Philippines	998	0.131	0.338	998	0.110	0.313	1000	0.558	0.497
Singapore	1000	0.014	0.118	1000	0.116	0.320	1000	0.313	0.464
Thailand	997	0.026	0.159	995	0.185	0.388	1000	0.270	0.444
Taiwan	996	0.013	0.114	995	0.108	0.310	1001	0.239	0.427
Vietnam	958	0.026	0.160	919	0.161	0.368	1000	0.425	0.495
Total	17608	0.031	0.173	17569	0.099	0.299	17768	0.309	0.462

Figure 1

Financial inclusion measured by formal account and the level of economic development in 2011

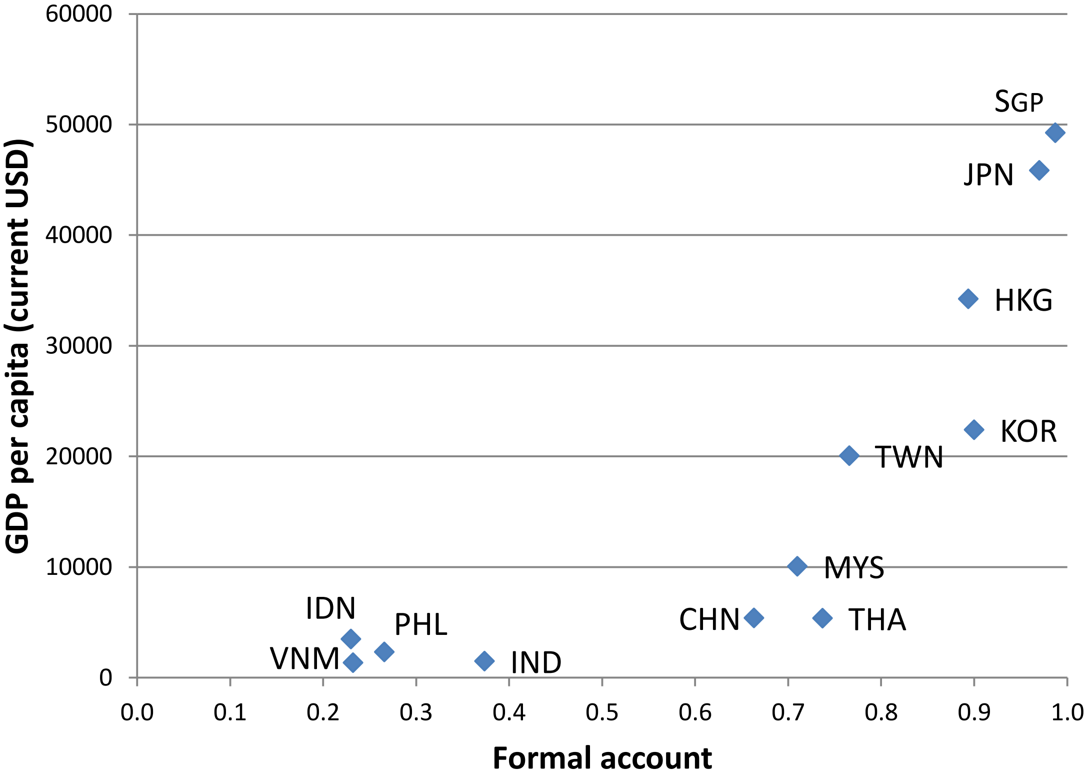
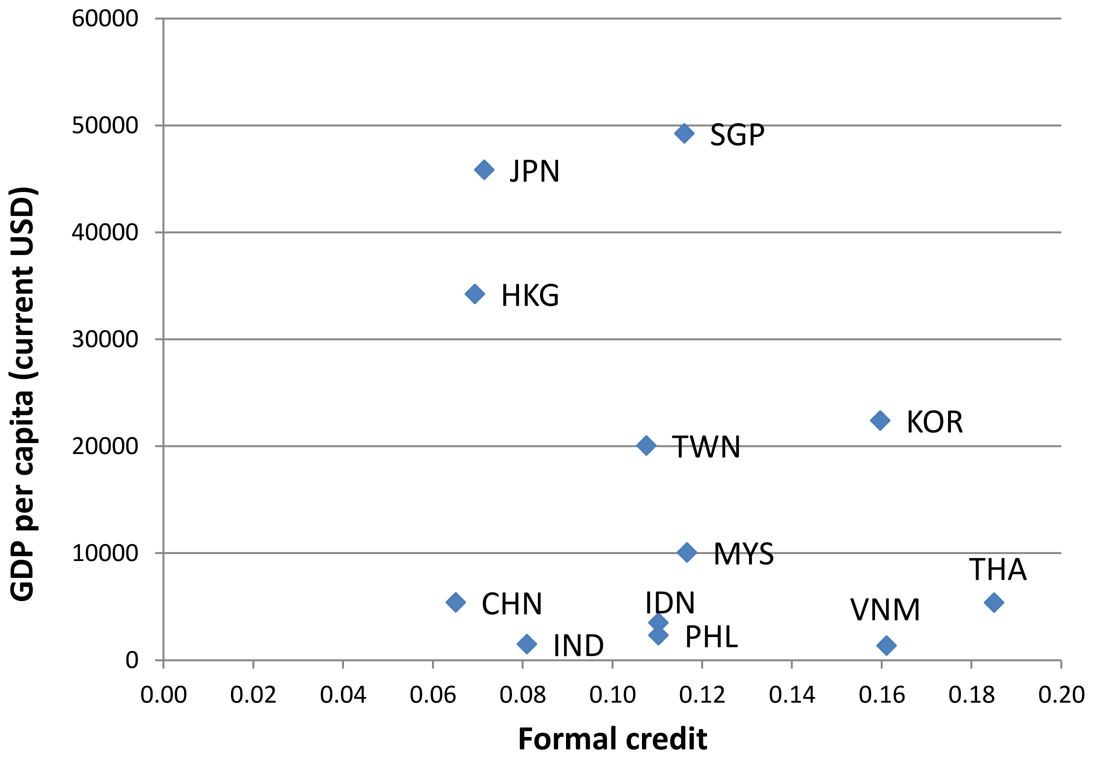


Figure 2

Financial inclusion measured by formal credit and the level of economic development in 2011



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ISSN 2342-205X