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BRICS: financial literacy and financial inclusion

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Abstract

In this paper we address the status of financial education and financial inclusion in BRICS countries where inequality and poverty are still present. As financial inclusion must be paired with financial literacy to improve people's financial capabilities, we review how BRICS countries are managing such issues. Data from the Standard & Poor's Ratings Services Global FinLit Survey 2014 to analyze financial literacy and the Global Financial Inclusion Database 2014 and the Financial Access Survey 2015, to examine the financial inclusion were used. As no more than 5 out of 10 people in BRICS countries answer correctly basic questions about financial issues, and results from the national strategies for financial education are still unavailable, it is difficult to assess whether people will be capable to use financial instruments and reap the benefits of the financial inclusion; thus, at the moment, the questions about universal financial access are still unsolved.
Keywords: BRICS, Financial access, financial capability, financial education, financial literacy.

Resumen

En este artículo abordamos el estado de la educación y la inclusión financiera en los países BRICS donde la desigualdad y la pobreza siguen presentes. Del mismo modo la inclusión financiera debe combinarse con la educación financiera para mejorar las capacidades financieras de las personas; asimismo, revisamos cómo los países BRICS están gestionando dichos problemas. Se utilizaron los datos de la Encuesta Global FinLit 2014 de Standard & Poor's Ratings Services para analizar la educación financiera, la base de datos de inclusión financiera mundial 2014 y la encuesta de acceso financiero 2015 para examinar la inclusión financiera. Dado que no más de 5 de cada 10 personas en los países del BRICS responden correctamente a preguntas básicas de problemas financieros, y los resultados de las estrategias nacionales para la educación financiera aún no están disponibles, es difícil evaluar si las personas serán capaces de usar instrumentos financieros y obtener los beneficios de la inclusión financiera. Por lo tanto, en este momento, las preguntas sobre el acceso financiero universal aún están sin resolver.
Palabras clave: BRICS, acceso financiero, capacidad financiera, educación financiera.

Introduction

Financial inclusion may be a valuable tool to improve people's well being if paired with financial literacy. The former has been a leading mandate of international organizations like the World Bank, among others, in the aftermath of the microfinance revolution once its benefits were publicly announced. However, microfinance had its drawbacks (Dichter and Harper, 2007; Bateman, 2010) and financial education was found to be low in most countries. The Pandora's box was opening: neither people was capable to use the financial tool made available nor some microfinance institutions were (too much) different from traditional moneylenders (Raccanello, 2013).

As financial education was considered to be a prerequisite for an effective financial inclusion, efforts were directed toward augmenting people's capabilities in this regard. In this paper the analysis of such efforts for BRICS countries is discussed. After the introduction, section 2 presents general information for BRICS and motivate the focus on these countries questioning the consensus on the financial inclusion paradigm and its theoretical benefits. Section 3 discusses financial education and recent data; survey's results confirm that knowledge is low and Financial Education National Strategies for each country are briefly resumed. Financial inclusion indicators and countries' statistics are the core of section 4. The last section concludes.

1. BRICS: general information

BRIC is the acronym referring to G20 emerging economics Brazil, Russian Federation, India, China coined in 2001. As South Africa joined the club in 2010, BRIC were renamed as BRICS. All five countries shown a higher GDP growth rate than developed countries, and the regional influence they exert in the region they belong to is beyond any doubt. Actually, these countries host over 3 billion people and produce about 20% of the gross world product. Data reveal (Russian Federal State Statistics Service [Rossstat], 2015) that infra and inter country inequality is still present (see Table 1). Although rural India scores better than the urban counterpart, country comparison reveals profound income inequalities, especially between South Africa and other club members. Inequality is also coupled with several million people in poverty.

Table 1. BRICS: Income inequality and poverty

Country		Year	Gini Index	Year	% below poverty line
Brazil		2013	0.497	2012	9
Russian Federation		2014	0.416	2012	10.7
India				2011	21.9
	Rural	2011–12	0.280		
	Urban	2011–12	0.367		
China		2014	0.469	-	Not available
South Africa		2011	0.650	2010	53.8

Source: Gini index, Rosstat, 2015, p. 12.

1.1 Questioning Universal Financial Access

Despite the improvement in financial access between 2011 and 2014, when 700 million adults became account holders, there were still 2 billion adults unbanked (Demirgüç, Klapper, Singer, and Van Oudheusden, 2015). Accordingly, in 2015 the World Bank Group and public and private sector partners committed to promote financial inclusion to achieve the Universal Financial Access by 2020 (UFA, 2020).

Data show that 25 countries[1] concentrate 73% of the excluded; India and China sum up about 32%, Brazil 2.4%, South Africa (0.5%) and Russian Federation (<0.5%) - the only country not included in the list. Accordingly, BRICS by themselves account about half of the excluded (World Bank, 2016).

The focus of the (financial) international community toward UFA 2020 suggests financial inclusion as a necessary and positive tool for people; sometimes justified as having to satisfy a pressing need for a universal access to financial services. Such situation is framed in the Mader's (2016) provocative discussion where financial inclusion assumptions widely supported by the literature are questioned. According to Mader, advocates of financial inclusion consider: 1) a causal relationship from financial inclusion to developmental outcomes and broader benefits; 2) the extension of financial services is directly beneficial to the poor; and 3) there is an untapped business opportunity in providing financial services to the poor.

[1] Bangladesh, Brazil, Colombia, Cote d'Ivoire, China, Democratic Republic of Congo, Egypt, Ethiopia, India, Indonesia, Kenya, Mexico, Morocco, Mozambique, Myanmar, Nigeria, Pakistan, Peru, Philippines, Rwanda, South Africa, Vietnam, Tanzania, Turkey, and Zambia.

Lack of solid impact analysis of financial inclusion and microfinance programmes cast doubts on peremptory claims about the positive effects of such strategies and programmes.[2] In this regard, we agree with the United Nation's moderate position that recognizes inclusive finance not requiring that eligible people *will use* but rather should be able to *choose to use* financial services (UN, 2006; cited in Mader, 2016, p. 13).

On one hand, the use of financial services when people lack financial education may be harmful and at best it will not convey expected improvement in well-being; on the other hand, the abuses of financial services providers draw attention on (financial) consumer protection. With regards to the former case the direct consequences consist of lower savings, a poor planning for retirement, higher debt and suboptimal financial decisions overall (Stango and Zinman, 2009; Hill and Kozup, 2007; Lusardi and Mitchell, 2007; Cohen and Sebstad, 2003; Hilgert, Hogarth and Beverly, 2003). The latter refers to unauthorized use of client data, predatory practices and/or deceptive advertising performed by financial intermediaries mixed with aggressive selling techniques (Jeurissen and Van de Ven, 2006) that may flourish in low competitive environments coupled with credit-rationed-borrowers, especially when the legal framework is weak (Drury, 2009; U.S. Department of Housing and Urban Development [US-HUD], 2001).

Accordingly, financial inclusion has to be paired with financial education programmes; such approach, according to the OECD (2013), was considered by all BRICS countries, where China was the only one lagging behind.

> Despite the importance of the financial education programmes to improve people's financial capabilities, several shortcomings need to be addressed to improve results; the theoretical nexus between financial education, financial capability and financial inclusion in order to achieve a change in well-being is expected by most of the agencies involved. However, to attain the goal, monitoring and evaluation (M&E) of financial education programmes is paramount but, unfortunately, experience in this regard has been extremely limited because of different reasons. These include the costs, the intrinsic public-good-characteristic of the result of an evaluation that cannot impede other providers to benefit, lack of M&E toolkit, the resistance by programmes providers that could jeopardize funding in case of negative results, and, above all, because not understanding the importance of a rigorous

[2] Interested readers may follow the entire discussion on this topic in Mader (2016).

> evaluation. Thus, M&E for financial education programmes is seldom considered, a situation that, despite good intentions, might not detecting program impacts misaligned to expectations. Financial education programmes should also rely to recent advances in behavioral finance and behavioral economics as departing from standard microeconomic theory in order to understand people's behavior can help understanding the connection between knowledge and decisions (Holzmann, Mulaj and Perotti, 2013, p. 78-81).

2. Financial education

2.1 Definition

Financial education should be intended as:

> The process by which financial consumers/investors improve their understanding of financial products and concepts and, through information, instruction and/or objective advice, develop the skills and confidence to become more aware of financial risks and opportunities, to make informed choices, to know where to go for help, and to take other effective actions to improve their financial well-being (Organisation for Economic Cooperation and Development [OECD], 2005, p. 13).

That is, a natural complement of financial access (see section 4 below) for clients in order to attain a diligent financial products usage. It has been acknowledged that financial education is low in many countries and as such not too much correlated with higher education levels as people with higher and lower formal education generally lack financial literacy (Lusardi, 2008). Nevertheless, vulnerable groups showed lower financial education in the literature and as such, specific strategies have to be implemented in order to reach them.

We acknowledge that literacy in this regard can be obtained both from theory and practice; the exposure of previously unbanked people to formal financial products when lacking previous practical experience may be related with over-indebtedness and evident negative consequences on household well-being.

Of course, resulting financial distress may lead to asset seizure, which, in turn may deepen the economic consequences of debt; vulnerable groups, like elderly and youth, may be especially at risk. Also, households, when engaged in formal or informal production activities may be forced to sell their assets to repay the debt.

2.2 Data

By the end of 2016 the 2015 update of the OECD/International Network on Financial Education Survey on Measuring Financial Literacy and Financial Inclusion was available. Data collection ended on July 8th, 2016 and participating countries had to collect data from a representative sample of (at least) 1,000 adults.[3] As the previous survey was undertaken in 2010, the update provides a valuable opportunity to measure the changes in each country across the population, as well as between countries. Also, results will allow tracking any results following the implementation of national strategies for financial education. Unfortunately, out of BRICS, India was not included hampering an up-to-date (2016) data review.

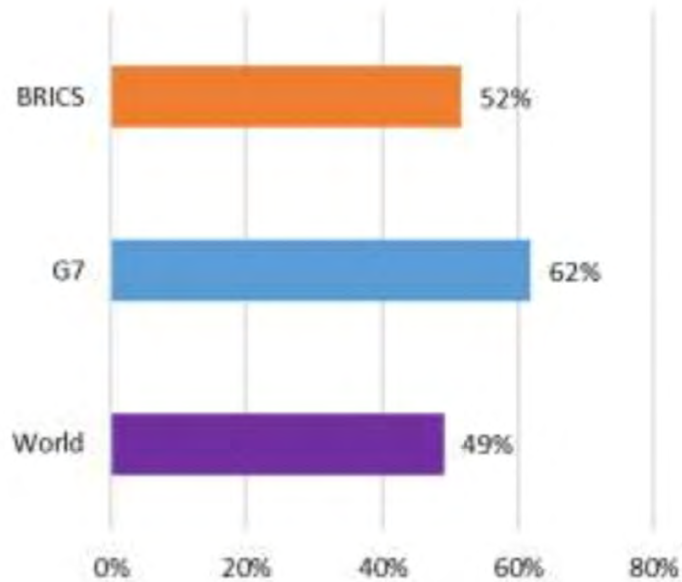
Because of inter-BRICS-data comparison, we refer to the Standard & Poor's Ratings Services Global FinLit Survey 2014 (Klapper, Lusardy and Oudheusden, 2015). In this survey, during 2014, more than 150,000 nationally representative and randomly selected adults (15 years and above) in more than 140 economies were interviewed (face-to-face or via telephone). Four basic financial education themes were analyzed:

1. Numeracy/simple interest.
2. Interest compounding.
3. Inflation, and
4. Risk diversification.

Results[4] show that for numeracy/simple interest (see Figure 1) G7 outperform BRICS and World. Nevertheless, it is worth mentioning that about half of the surveyed in BRICS could answer this topic correctly. The same pattern holds for people answering correctly on interest compounding topic although percentages are smaller (see Figure 1 and 2).

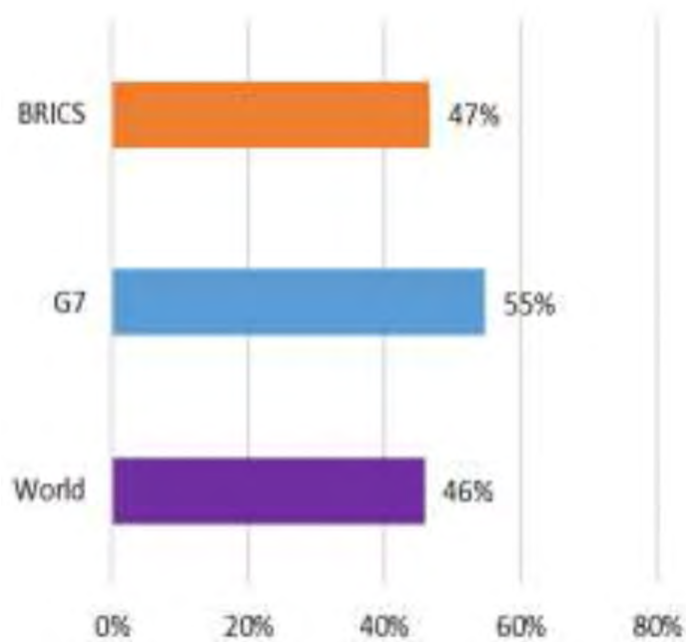
[3] Available at: http://www.oecd.org/finance/financial-education/2015finlitmeasurementexercise.htm
[4] In all figures simple averages for BRICS and G7 were calculated. World averages do not include G7 and BRICS countries.

Figure 1. Interest (% of correct answer)



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

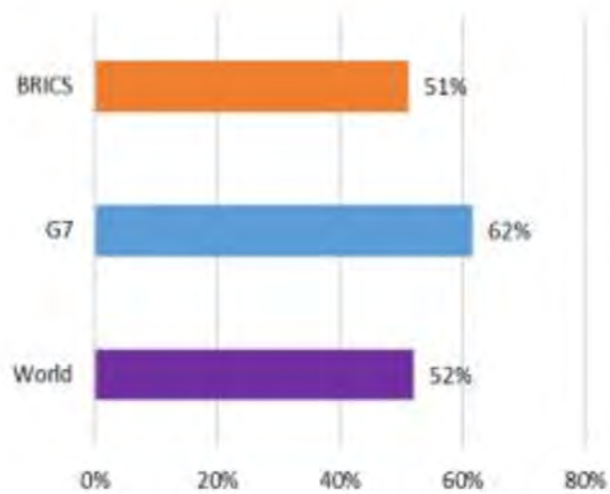
Figure 2. Interest compounding (% of correct answer)



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

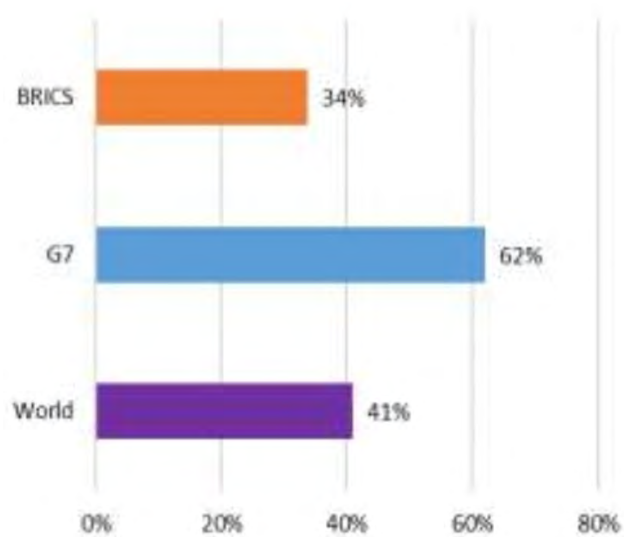
In figure 3 and figure 4 percentages of those who answered correctly on inflation and risk diversification topics are reported. It is straightforward to detect that people in BRICS failed to the last topic with a higher likelihood.

Figure 3. Inflation (% of correct answer)



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

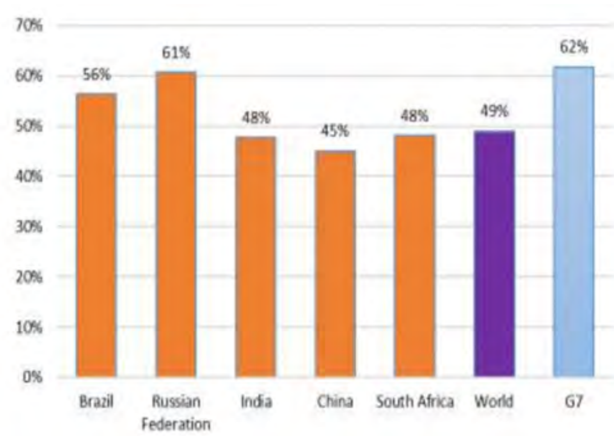
Figure 4. Risk Diversification (% of correct answer)



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

Between countries comparison reveals ample heterogeneity among BRICS in inflation and risk diversification topics. Breakdown country by each topic is presented next (see Figures 5, 6, 7 and 8).

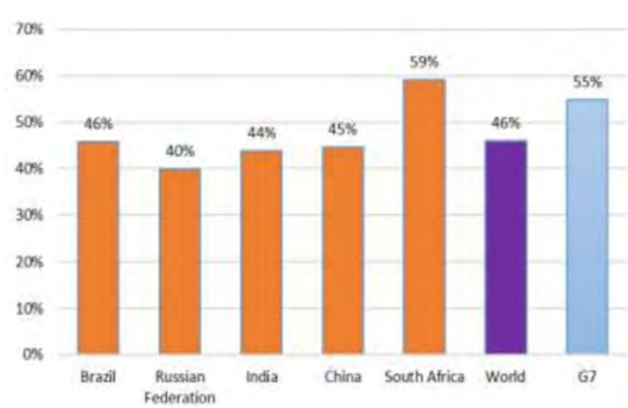
Figure 5. Interest: Country Breakdown (% of correct answer)



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

According to data, Russian Federation and Brazil score above 50%, the former nearly G7 countries, the latter 6 points below. India, China and South Africa are showing a poor performance.

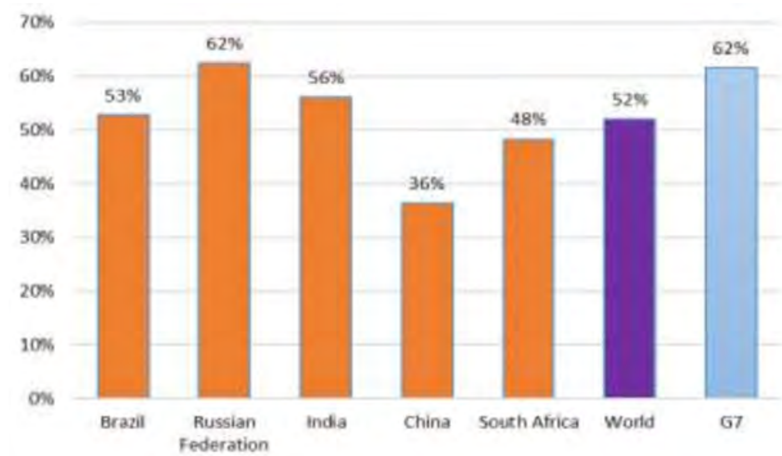
Figure 6. Interest Compounding: Country Breakdown (% of correct answer)



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

For interest-compounding topic, all BRICS score below 50%; only South Africa achieves a higher score (59%), even better than the G7 (55%).

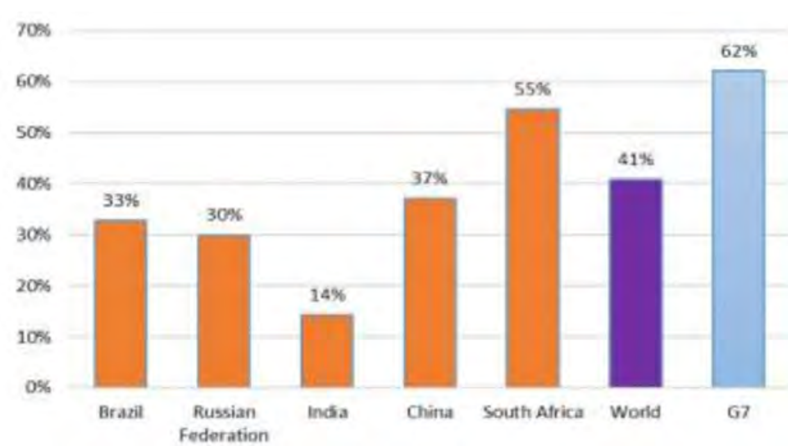
Figure 7. Inflation: Country Breakdown (% of correct answer)



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

On inflation topic, Russian Federation ties with G7 (62%), Brazil and India scores above 50% but China performs poorly by reaching 36% only.

Figure 8. Risk Diversification: Country Breakdown (% of correct answer)

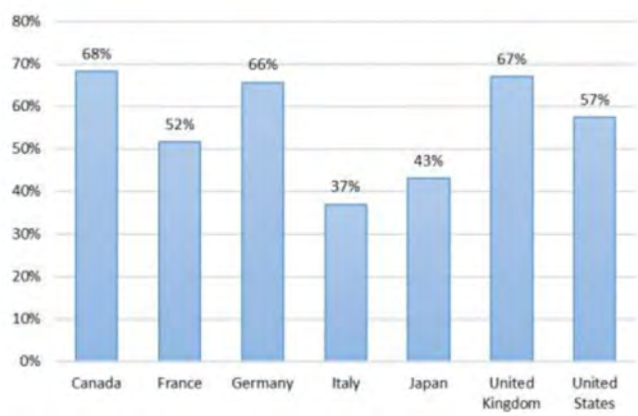


Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

On risk diversification, although South Africa is a little above 50%, all BRICS are scoring poorly with respect to G7, especially India that reaches 14% only. In the survey, as people were considered having financial literacy whether they answered 3 out of 4 topics correctly, data for individual G7 and BRICS countries are reported next.

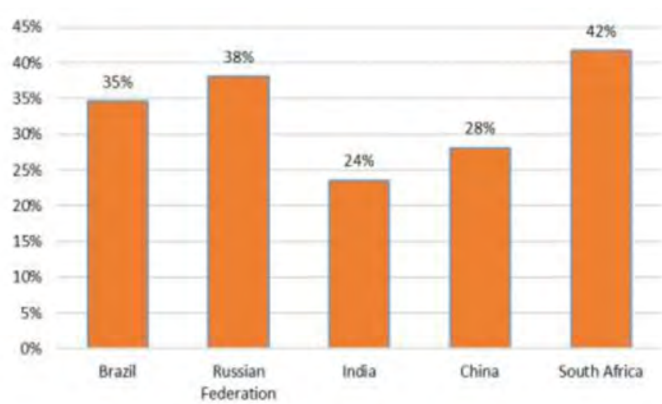
Data reveal heterogeneity in G7 (see Figure 9) and in BRICS (see Figure 10) as well; in the former Canada, UK and Germany score nearly, but a difference of about 30 percentage points with respect to Italy is observed. In the latter, South Africa (42%) scores almost as good as Japan (43%), but India is lagging behind by 18 percentage points (24%).

Figure 9. Financial Literacy in G7



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

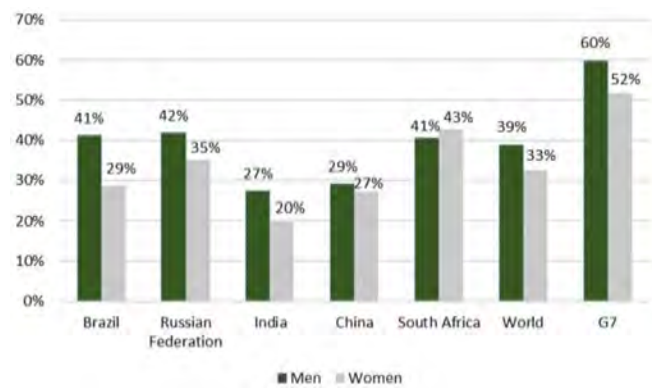
Figure 10. Financial Literacy in BRICS



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

When comparing financial literacy according to respondent's gender, males score better than females in all BRICS but South Africa. Males outperform women at world level and also in G7 countries (see Figure 11).

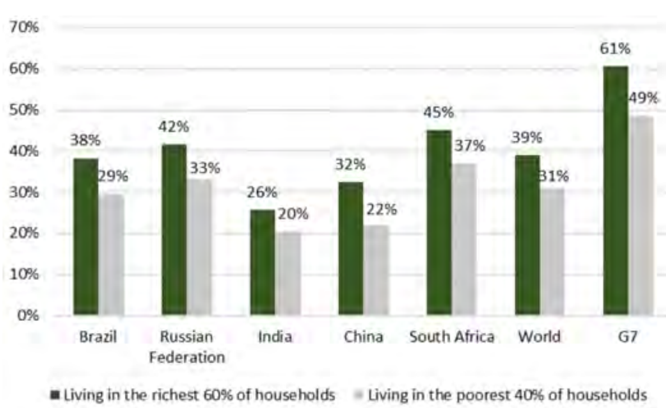
Figure 11. Financial literacy: gender



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

When comparing financial literacy in the top 60% of richest households vs. 40% of poorest households the former scores better than the latter in all BRICS countries as well as at world level and in G7 (see Figure 12). Thus, besides income, poorest households are vulnerable from a financial education point of view; this is, money scarcity and wrong financial decisions may worsen their financial situation.

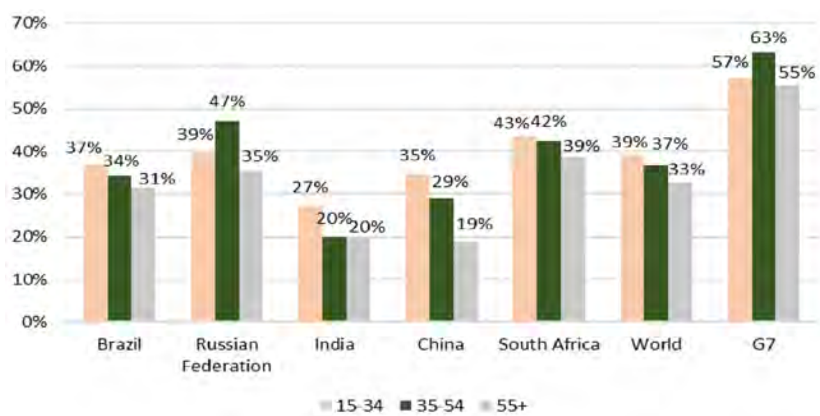
Figure 12. Financial Literacy: household income



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

According to the age group of the respondents (see Figure 13) we appreciate that people over 55 years old have always lower financial literacy than those between 15 and 34 years old. The middle group (35-54 years old), may either confirm a decreasing trend according to age (Brazil, China, South Africa and World) or being more financial educated than youths (Russian Federation and G7). We conclude that people aged 55 years old and over tend to have less financial literacy than other age groups.

Figure 13. Financial literacy: age groups



Source: Authors' calculation with Standard & Poor's Ratings Services Global FinLit Survey 2014.

Due to the importance of financial education, in the next section we focus on the national strategies being pursued by BRICS during 2012-2013.

2.3 Financial Education National Strategies

According to OECD (2013) BRICS are aware of their citizen's low financial education and uncoordinated effort to raise literacy. In this regard actions to fill this gap were already being performed mostly by private sector. However, the pervasive lack of coordination may have probably hindered the impact of such initiatives, not measured yet, and some vulnerable groups may have lagged (further) behind. Such situation may also have intensified the financial inclusion gap because of the financial sophistication of new financial products available and the specific geographic features of each country.

Different strategies need to be implemented in order to reach different sectors of the population, and national authorities have to choose effective medias to inform vulnerable groups; as education level, among other characteristics, differ across countries, a *one-size-fits-all* plan may not be the most suitable policy. A growing interest on monitoring and evaluation of program effectiveness and impacts is spreading over some countries; we hope this will continue in order to improve the national strategies that nowadays are being pursued.

2.3.1 Brazil

In Brazil the efforts toward a National Strategy for Financial Education (NSFE), due to the middle class expansion, the increase in credit demand and demographic changes coupled with low levels of financial education, began in 2007. Three years later (2010) the draft of the Estratégia Nacional de EducaÇão Financeira (ENEF) was ready and launched in 2011. ENEF is a "(…) strategy nationally coordinated to empower consumers, policies on financial education, financial inclusion, and consumer protection (…) policies are synergistic and complementary to each other" (OECD, 2013, p. 67).

Because the ENEF is focused on children, youths and adults, it relies on the support of the Ministry of Education as well as state and municipal departments of education in order to have a good outreach at national and local level. Elementary and high school play a crucial role to target children and youths, other actions, in partnership with public and private actors, allow including adults and retirees.

The appealing aspect of the ENEF is that goals and competencies have been defined on spatial and temporal dimensions (see Figure 13) (OECD, 2013, p. 76); the former deals with the impact of individual actions on the social context, and the latter focuses on the consequences of those actions taken in the present with its impact in the future.

2.3.2 Russian Federation

The expansion of the Russian financial sector during the last decade has not been paired with a progress in clients' financial education; thus, people might be using financial instruments without the preparation needed. Limited trust in financial intermediaries and financial institutions is also prevalent. The situation calls for government intervention aimed at improving financial consumer protection and education policies in this regard (OECD, 2013, p. 218).

Existing financial education projects promoted by the private sector –often fee based– were aimed at some sectors of the population only. Also, the content of the programmes was not aligned to OECD recommendations on this matter. The lack of coordination and the omission of vulnerable sectors of the population called for a national strategy and, to solve this need according to OECD recommendations, the Russian government in partnership with the World Bank launched the National Financial Education and Financial Literacy Project in 2011. Target population were young people, low income and vulnerable groups. Core goals of the project, besides promoting financial literacy and prudent behavior, included improving the efficiency of consumer protection; these had to be attained through the public administration, private sector participants, education sector, and NGOs. The efforts were to be made in every region of the Russian Federation, according to four pillars: 1) development of a financial strategy and monitoring and evaluation of financial literacy and consumer protection policies; 2) financial literacy capacity building; 3) development and implementation of education programmes and an information campaign to promote financial literacy; and 4) strengthening the financial consumer protection framework (OECD, 2013, p. 223-224).

2.3.3 India

In 2011, the Technical Group on Financial Inclusion and Financial Literacy was created in order to coordinate financial education efforts and to prepare the NSFE for India (2012-2013). At the beginning the strategy targeted financially excluded citizens, financially included followed, and lastly people had to be informed on financial products available (OECD, 2013, p. 127) to provide a comprehensive understanding of the basics of financial education and then the features of financial instruments. Through financial education and informed choices, such strategy is planned to provide benefits to the society such as knowledge and skills, avoid exploitation and over-indebtedness, promoting entrepreneurship, and saving for retirement, among others.

The strategy is based on a careful diagnostic where domestic needs and international experience were reviewed and main stakeholders identified. Because of the existing differences throughout the country, the roadmap was established involving both public and private sector, NGOs, Self Help Groups (SHGs) and microfinance institutions (MFIs) in order to maximize outreach during the next five years. It is remarkable that implementation was tailored to specific vulnerable groups (i.e. illiterates, impaired, etc.) as well as recognizing the need of regulation changes in order to avoid predatory practices. Accordingly, financial education strategy was delivered to the audience via school curriculum, social marketing, SHGs and MFIs, among other channels.

2.3.4 China

As of 2012-2013 the NSFE in China was still on design while recognizing that neither financial regulation, nor market regulation can protect consumers. The pro-active role in order to avoid harmful financial consequences for consumers can be pursued by clients themselves being empowered with financial knowledge with respect to financial education and financial products. The national strategy began with the assessment of the basic needs; that is, through collecting information. The strategy is to be implemented by the People's Bank of China and other actors belonging to the financial public sector, financial institutions and decentralized agencies. Main policy priorities are: 1) to conduct a national financial capability survey and design an education plan accordingly; 2) to provide tailor-made financial education for different groups with appropriate focus; and 3) to protect disadvantaged groups and enhance financial availability (OECD, 2013, p. 110).

It is worth attention that financial education programmes target youth, people in rural area; financial bodies are aware that they require appropriate delivery mechanisms and they have to perform effectiveness analysis and programmes evaluation.

2.3.5 South Africa

As for previous BRICS countries, the rationale for establishing a NSFE in South Africa is justified by the increasing complexity of financial instruments coupled with population's low financial education. Improving consumers financial capability is supposed to enhance financial market competitiveness and efficiency, decreasing predatory practices due to asymmetric information. Before launching NSFE, lack of design and coordination in financial education programmes were hindering efficiency and effectiveness. In order to make a turn, the goals of the national strategy, to be implemented under the supervision of the National Consumer Financial Education Committee (NCFEC), can be resumed in considering financial education as part of a wider market conduct and consumer protection policy approach; consumer financial education is part of a group of a consumer education initiative, financial education is a multi-stakeholder and centrally coordinated approach and, the national strategy with risk based priorities is essential (OECD, 2013, p. 251, 256). It is important mentioning that the baseline, that has been carried out in 2011-2012 to identify consumers financial education needs, should be renewed in full (every five years) and, on a yearly basis, a condensate version should be administered to test population advancement in this regard.

3. Financial inclusion

3.1 Definition

Four core dimensions of financial inclusion are: 1) access, 2) usage, 3) quality and 4) impact measurement. To take into account the sources of information to measure such dimensions at country level rather than global surveys, the Global Partnership for Financial Inclusion developed a “Basic Set” of core indicators ahead of the G20 Summit in June 2012 (World Bank, 2012, p. 23-24). We report indicators next; after each indicator, usage, access and quality stand for the dimension it is related with:

1. Formally banked adults: Percentage of adults with an account at a formal financial institution [can be broken down by gender]. [Usage]
2. Adults with credit from regulated institutions: Percentage of adults with at least one loan outstanding from a financial institution [can be broken down by gender]. [Usage]
3. Formally banked enterprises: Number or percentage of SMEs with accounts. [Usage]
4. Enterprises with an outstanding loan from a regulated financial institution: Number or percentage of SMEs with an outstanding loan. [Usage]
5. Points of service: Number of branches per 100,000 adults. [Access] In 2013 (GPFI, n.d.), the G20 Financial Inclusions Indicators expanded by adding:
6. Point of Service: Number of POS terminals per 100,000 inhabitants. [Access]
7. Point of Service: Number of ATMs per 100,000 adults OR number of ATMs per 1000 sq. km. [Access]

8. Adults with insurance: Number of insurance policy holders per 1000 adults. [Usage]
9. Cashless transactions: Number of retail cashless transactions per capita. [Usage]
10. Mobile transactional use: % of adults that use their mobile device to make a payment. [Usage]
11. High frequency of account use: % of adults with high frequency use of formal account. [Usage]
12. Saving propensity: Saved at a financial institution in the past year. [Usage]
13. Remittances: % of adults receiving domestic and international remittances. [Usage]
14. E-money accounts: Number of e-money accounts for mobile payments. [Access]
15. Interoperability of Points of Service: Combined index of: Interoperability of ATMs and Interoperability of POS terminals. [Access]
16. Financial Knowledge: Financial knowledge score. [Quality]
17. Financial Behaviour: Source of emergency funding. [Quality]
18. Disclosure Requirements: Disclosure index combining existence of a variety of disclosure requirements. [Quality]
19. Dispute Resolution: Index reflecting the existence of formal internal and external dispute resolution mechanisms. [Quality]
20. Cost of Usage: Average cost of opening a basic current account. [Quality]
21. Cost of Usage: Average cost of maintaining a basic bank current account (annual fees). [Quality]
22. Cost of Usage: Average cost of credit transfers. [Quality]
23. Credit Barriers: % of SMEs required to provide collateral on their last bank loan (reflects the tightness of credit conditions). [Quality]
24. Credit Barriers: Getting credit: Distance to frontier. [Quality]

It is straightforward recognizing that prior to 2013 usage indicators were mostly considered; then, access, quality and some other usage indicators were added. The emphasis was devoted to quality indicators in 2013. Although GPFI informs explicitly that “a more comprehensive set of indicators will be developed” at the moment none measuring impact has been added yet, neither belongs to the 2016 agenda (GPFI, 2016, p. 2), a situation that does not solve the issues raised by Mader (2016).

To assess financial inclusion in BRICS countries we relied on two sources of information: 1) the Global Financial Inclusion Database 2014 (Global Findex 2014), the world's most comprehensive database on financial inclusion, that provides in-depth data on how individuals save, borrow, make payments, and manage risks; it is based on interviews with about 150,000 adults in over 140 countries; 2) the Financial Access Survey 2015, a database that contains 152 time series resulting in 47 basic indicators which are grouped by geographic outreach of financial services, and use of financial services. The database currently contains annual data and metadata for 189 jurisdictions covering an eleven-year period (2004–2014).

Out of the 24 indicators above, only 118 could be found referring to usage, access and quality dimensions.

3.2 Data

Before analyzing data for financial inclusion in BRICS, we briefly review some general information about who borrowed from an informal lender (see Table 2) and from a financial institution (see Table 3) according to income distribution (poorest 40% vs richest 60%).

Along time, despite the efforts made by BRICS in expanding (formal) financial access to population, we appreciate that informal lenders continue being used by both income groups, especially in India and South Africa where a sharp increasing trend is observed between 2011 and 2014. In other countries of the club, people do not commonly borrow (percentages are less than 1.5%). As expected, in 2011 poorest people tend to rely to informal lenders more often than the richest counterpart; however, in Brazil and in the Russian Federation by 2014 this situation is reversed. Information for usage indicators no.1, 2, 8, 10, 12 and 13; for access no. 5, 6, 7 and 14 was available; for quality no. 17 was available.

Table 2. Borrowed from an informal lender, income, poorest 40% and richest 60% (% ages 15+)

Countries	2011		2014	
	Poorest 40%	Richest 60%	Poorest 40%	Richest 60%
Brazil	1.17	0.86	0.94	1.18
Russian Federation	1.60	1.47	0.73	1.03
India	6.36	6.09	15.72	10.52
China	0.67	1.32	1.05	1.07
South Africa	4.69	8.24	23.67	14.67

Note: Denotes the percentage of respondents who report borrowing any money from a private lender in the past 12 months (income, poorest 40% and richest 60%, % age 15+).

Source: Global Findex, World Bank 2014.

By 2011 in all BRICS, but China, a lower proportion of poor people borrowed from a financial institution than the rich people. If financial inclusion would be interpreted as borrowing from financial institutions, then along time, *ceteris paribus*, China and South Africa should take care about the poorest 40% (as they tend to decrease borrowing), while India should review its strategy. For other countries, borrowing from financial institutions is increasing; while this is representing a higher usage, as borrowing means indebting, a deeper analysis of household debt is needed before concluding whether this situation is benefitting households.

Table 3. Borrowed from a financial institution, income, poorest 40% and richest 60% (% ages 15+)

Countries	2011		2014	
	Poorest 40%	Richest 60%	Poorest 40%	Richest 60%
Brazil	4.90	7.31	7.47	14.94
Russian Federation	6.36	8.62	10.05	10.51
India	7.44	7.87	4.93	7.30
China	7.97	6.78	5.88	12.05
South Africa	4.70	11.66	4.29	17.52

Note: Denotes the percentage of respondents who report borrowing any money from a bank, credit union, microfinance institution, or another financial institution such as a cooperative in the past 12 months (income, poorest 40% and richest 60%, % age 15+).

Source: Global Findex, World Bank 2014.

Data regarding people with an account at a financial institution are reported next in Table 4. In all countries a steady increase in account holders is observed; financial inclusion in this regard is substantial. But accounts seem to be used for saving (see Table 4), rather than for obtaining a credit (see Table 3). Indeed, saving is very important for people because providing an avenue to accumulate resources in case of emergency or any other contingency, besides a higher security, but a sort of bank reciprocity, because of saving-credit gap, is not observed.

Table 4. Account at a financial institution, income, poorest 40% and richest 60% (% ages 15+)

Countries	2011		2014	
	Poorest 40%	Richest 60%	Poorest 40%	Richest 60%
Brazil	39.40	67.10	58.47	74.62
Russian Federation	38.84	54.67	61.82	71.20
India	27.34	40.53	43.77	58.59
China	46.01	75.61	72.04	83.62
South Africa	38.79	63.64	56.47	77.32

Note: Denotes the percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution (see year-specific definitions for details) (income, poorest 40% and richest 60%, % age 15+).

Source: Global Findex, World Bank 2014.

It seems that accounts increase mostly because of a saving need (usage indicator no. 12 – data clearly show that adults were relaying consistently to financial institution for saving among surveys in all countries, especially in China and South Africa); financial sector's lending practices should be carefully reviewed to discern whether credit rationing is not an issue.

Table 5. Saved at a financial institution (% age 15+)

Countries	2011	2014
Brazil	10.29	12.33
Russian Federation	10.88	15.46
India	11.60	14.36
China	32.09	41.15
South Africa	22.08	32.73

Note: For 2011, denotes the percentage of respondents who report saving or setting aside any money at a bank or another type of financial institution in the past 12 months (see year-specific definitions for details) (% age

15+). For 2014, denotes the percentage of respondents who report saving or setting aside any money by using an account at a formal financial institution such as a bank, credit union, microfinance institution, or cooperative in the past 12 months (% age 15+).

Source: Global Findex, World Bank 2014.

3.2.1 Usage indicators

According to usage indicator no. 1 (see Table 6), in all BRICS an increase in adults having a bank account, no matter the gender, is observed. Although a smaller percentage of women than men had a bank account in 2011 in all countries, the gender gap by 2014 is narrowing in Brazil, India and South Africa, but it is widening in the Russian Federation (where women surpassed men by more than 6%) and China.

Table 6. Adults (% age 15+) having a bank account at a financial institution

Countries	2011		2014	
	Male	Female	Male	Female
Brazil	61.09	51.07	71.68	64.77
Russian Federation	48.78	47.70	63.79	70.19
India	43.73	26.49	62.47	42.64
China	67.58	60.01	81.42	76.36
South Africa	56.38	51.02	68.77	68.76

Note: Denotes the percentage of respondents who report having an account (by themselves or together with someone else) at a bank or another type of financial institution (see year-specific definitions for details) (male, % age 15+).

Source: Global Findex, World Bank 2014.

According to usage indicator no. 2 (see Table 7) in 2011 people seldom had a credit from a regulated institution, and women had less credits than men. By 2014, in all countries, but India, percentages increase and gender gap increases in Brazil (+3.32%) and India (+0.94%). It is remarkable that in the Russian Federation and South Africa the gap narrows by 4.23% and 3.45% respectively. In China the narrowing of the gap is very small (-0.48%).

Table 7. Adults (% age 15+) having credit from regulated institution

Countries	2011		2014	
	Male	Female	Male	Female
Brazil	6.55	6.12	13.86	10.11
Russian Federation	8.01	7.42	8.28	11.92
India	8.62	6.74	7.75	4.93
China	8.37	6.13	10.42	8.66
South Africa	11.36	6.47	12.85	11.41

Source: Global Findex, World Bank 2014.

Another usage indicator (no. 8), adults with insurance, may be proxied by data reported in tables 8 and 9. Unfortunately, data are available for 2011 only and for some countries are not available. In all BRICS but China, people do not pay for health insurance. This means that they have to deal with out-of-pocket expenditures when the national health insurance cannot provide the service needed or when citizens opt for a private medical service.

Table 8. Paid for Health insurance (% age 15+)

Countries	2011	
	Male	Female
Brazil	7.40	7.82
Russian Federation	6.59	6.79
India	7.30	6.23
China	47.68	46.71
South Africa	8.11	6.79

Note: Denotes the percentage of respondents who currently have health or medical insurance (in addition to national health insurance) and who personally purchased this insurance (% age 15+).

Source: Global Findex, World Bank 2014.

Data for agriculture insurance are available only for India and China where only a few peasants protect their crops and/or livestock from external events that may have catastrophic consequences. In this case, people do not ascertain insurance companies as valuable financial intermediaries that may help to deal with risk.

Table 9. Purchased agriculture insurance (% working in agriculture, age 15+)

Countries	2011
Brazil	N.A.
Russian Federation	N.A.
India	6.60
China	7.18
South Africa	N.A.

Note: Denotes the percentage of respondents who are farming, fishing or forestry workers and in the past 12 months have personally paid for crop, rainfall, or livestock insurance (% age 15+). N.A.: not available.

Source: Global Findex, World Bank 2014.

Due to the development in communication technology and its applications (i.e. M-PESA in Kenya) mobile accounts are an alternative tool to facilitate financial transactions. The G20 included (usage indicator no.10). Data for BRICS (see Table 10) show that this technology is rarely used in BRICS; South Africa is the only country where people seem being convinced of its advantages.

Table 10. Mobile phone used to pay bills, receive money, send money (% age 15+)

Countries	2011		
	Pay bills	Receive money	Send Money
Brazil	1.25	0.83	0.00
Russian Federation	1.73	1.78	1.45
India	2.24	1.99	0.61
China	1.33	0.52	0.59
South Africa	4.43	9.45	5.36

Note: Denotes the percentage of respondents who report using a mobile phone to pay bills in the past 12 months (% age 15+).

Source: Global Findex, World Bank 2014.

Despite the indicator no. 13 refers to domestic and international remittances, data are available for domestic remittances only (see Table 11). In 2014, more than half of the respondents in South Africa reported receiving some money, but in China and in the Russian Federation a significant proportion is receiving money too.

G20 financial inclusion indicator no. 12 refers to savings, data were previously reported (Table 5 above) and as such they provide evidence that people are relying on financial institutions to save. We remind that while saving is a decision of the account holder, having an account does not guarantee whatsoever that the client (saver) will access any credit as this is subject to the Bank's policies.

Table 11. Received domestic remittances in the past year (% age 15+)

Countries	2014
Brazil	6.40
Russian Federation	12.01
India	9.78
China	17.59
South Africa	54.20

Note: Denotes the percentage of respondents who report personally receiving any money in the past 12 months from a relative or friend living in a different area of their country. This includes any money received in person (% age 15+).

Source: Global Findex, World Bank 2014.

3.2.2 Access indicators

The Financial Access Survey 2015 provides few data regarding access indicators. Indicator no.5, regarding bank branches per 100,000 adults reveals that in all BRICS banks are expanding their network as data show a general increase during the eleven years' time span among the surveys (see Table 12). The most important improvement can be observed in Brazil and India followed by the Russian Federation. Although in China and in South Africa the indicator has been improving very slowly, access is improving for BRICS residents because a higher presence of bank branches. Of course, we expect some regional differences in each country that might be even quite important; this is why an in-deep analysis for each country is advised.

Table 12. Commercial bank branches (per 100,000 adults)

Countries	2010	2011	2012	2013	2014
Brazil	43.99	45.43	46.52	46.99	47.32
Russian Federation	35.16	36.83	38.30	38.55	36.98
India	10.14	10.62	11.31	12.00	13.04
China	N.A.	N.A.	7.72	7.81	8.06
South Africa	9.85	10.29	10.01	10.18	10.94

Source: International Monetary Fund, Financial Access Survey 2015.

The geographical outreach is one of the most known indicators (no. 7) regarding financial access; the number of ATMs per 1,000 Km2 and per 100,000 adults are the standard indicators. In figure 14 the geographical outreach measured by the number of ATMs per 1,000 Km2 for all BRICS countries report that India and China have the most important development as the indicator between 2006 and 2014 rises sixfold. The same behavior holds for the Russian Federation that had the lowest indicator in 2006. South Africa shows a good development too, with a threefold increase in the same period. The smallest improvement is observed in Brazil. Most recent data (2014) are presented next (see Table 13).

The number of ATMs per 1,000 Km2 is a slippery indicator as it depends on the size of the country; as such, when comparing it with the number of ATMs per 100,000 adults, Brazil and the Russian Federation are the worse according to the former but the best according to the latter. India, and China, the two most populated countries in the world, score very well according to 1,000 Km2 indicator but poorly with respect to 100,000 adults.

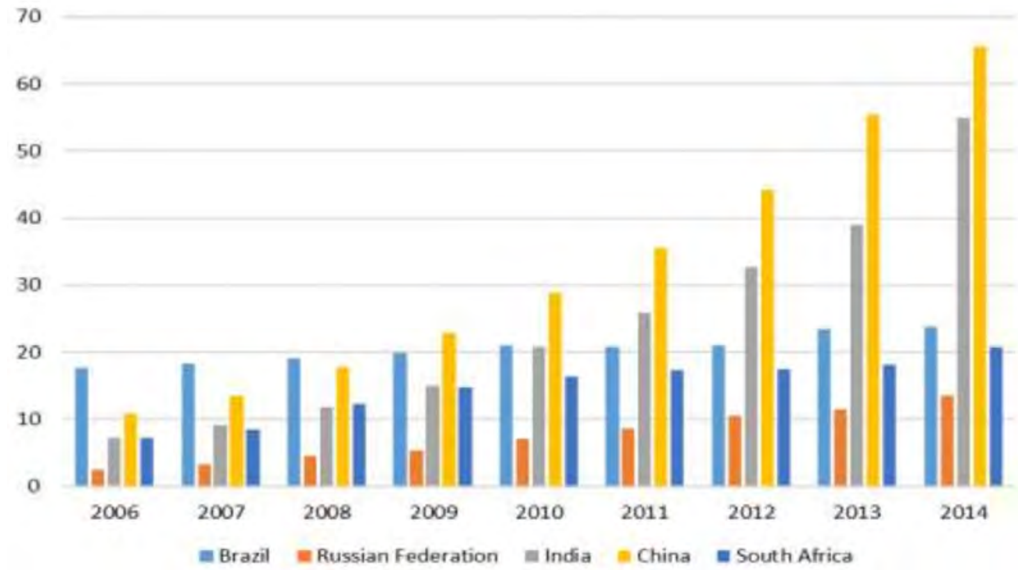
Table 13. Geographical outreach

Countries	2014	
	Number of ATMs per 1,000 Km2	Number of ATMs per 100,000 adults
Brazil	23.86	129.25
Russian Federation	13.60	184.70
India	54.90	18.08
China	65.49	55.03
South Africa	20.81	66.20

Source: International Monetary Fund, Financial Access Survey 2015.

Note: Data are shown as the total number of ATMs for every 100,000 adults in the reporting country. Calculated as (number of ATMs) * 100,000/adult population in the reporting country. Aggregation Method: Median.

Figure 14. Geographical Outreach: Number of ATMs per 1000 Km2



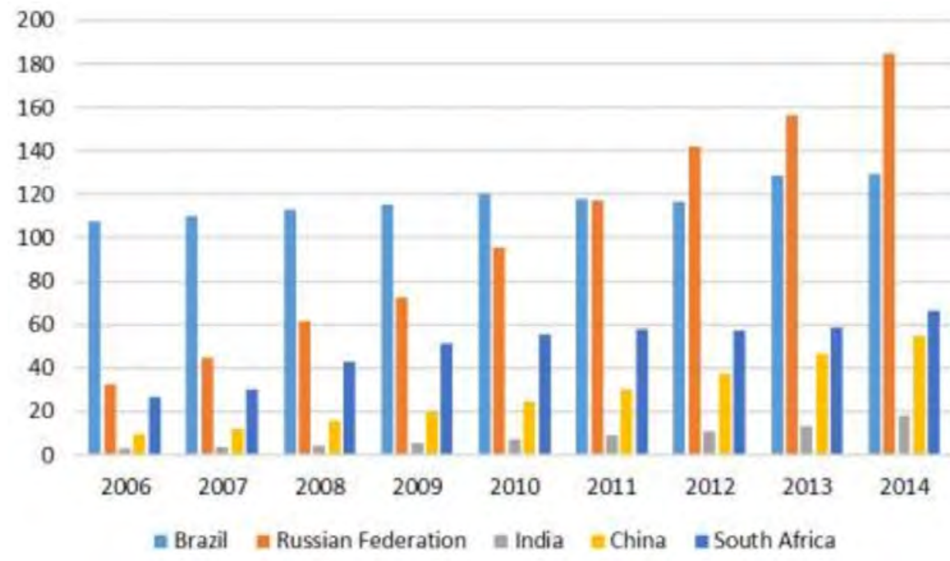
Source: International Monetary Fund, Financial Access Survey 2015.

Regarding the number of ATMs per 100,000 adults, the Russian Federation leads with almost 185, scoring even better than most European countries (United Kingdom: 129.76; Spain 119.63); among BRICS Brazil follows with an index similar to the UK. South Africa performs better than Latin American countries like Chile (56.58) and Mexico (48.99).[5] India is the most lagged country.

In order to analyze the trend in the number of ATMs per 100,000 adults, figure 15 reports yearly data for BRICS countries between 2006 and 2014 confirming the above observations. It is remarkable the increase of the indicator in the Russian Federation although all other countries attained a wider geographical outreach too.

[5] ATMs per 100,000 adults is available at: http://data.worldbank.org/indicator/FB.ATM.TOTL.P5

Figure 15. Geographical Outreach: Number of ATMs per 100,000 adults



Source: International Monetary Fund, Financial Access Survey 2015.

Indicator no. 14, referring to E-money accounts (Number of e-money accounts for mobile payments) may be proxied by information in table 14. Unfortunately, information is not available for some countries, but data reveal ample heterogeneity in mobile account as this access method is still not too much used, probably because security reasons and/or lack of trustworthiness by potential users.

Table 14. Mobile account (% age 15+)

Countries	2014
Brazil	0.86
Russian Federation	N.A.
India	2.35
China	N.A.
South Africa	14.43

Note: Denotes the percentage of respondents who report personally using a mobile phone to pay bills or to send or receive money through a GSM Association (GSMA) Mobile Money for the Unbanked (MMU) service in the past 12 months; or receiving wages, government transfers, or payments for agricultural products through a mobile phone in the past 12 months (% age 15+). N.A.: not available.

Source: Global Findex, World Bank 2014.

3.2.3 Quality indicators

The only quality indicator available in the database was referring to Financial Behaviour: Source of emergency funding (no.17). At a first glance, coming up with emergency funds is not very easy is Brazil, India and South Africa as 63.22, 49.37 and 56.93% or the respondents mentioned it is “not at all” or “not very possible”. In the Russian Federation and China, percentages are 23.04 and 21.62% showing this might be a problem for a certain part of the population only (see Table 15).

Table 15. Coming up with emergency funds (% age 15+)

Countries	2014			
	Not at all possible	Not very possible	Somewhat possible	Very possible
Brazil	44.19	19.02	23.14	12.34
Russian Federation	14.44	8.60	35.75	35.40
India	27.09	22.27	34.01	13.78
China	12.60	9.02	38.58	36.62
South Africa	38.10	18.83	22.05	18.20

Note: Denotes the percentage of respondents who report that in case of an emergency it is not at all/not very/somewhat/very possible for them to come up with 1/20 of GNI per capita in local currency within the next month (% age 15+). Percentages may not sum 100%.

Source: Global Findex, World Bank 2014.

When discarding the “not at all” situation, several sources of funds were available. Family or friends are the helpful option, together with personal savings. Work or loans from employers follow, prior to financial institution and private informal lenders (see Table 16). Accordingly, it seems that people tend to use the cheapest sources and in a lesser proportion the most expansive; a behavior consistent with financial capability at least about the cost of credit beside the easiness to get the funds needed.

Table 16. Main source of emergency funds (% able to raise funds, age 15+)

Countries	2014					
	Family or friends	Savings	Work or loan from employer	Financial institution or credit card	Private Informal lender	Other
Brazil	58.88	15.96	8.06	11.30	1.34	1.89
Russian Federation	52.66	25.46	10.75	7.29	0.16	0.69
India	41.32	34.77	12.24	0.96	4.30	2.42
China	23.40	60.28	12.09	0.80	0.19	2.44
South Africa	43.75	38.01	7.60	1.67	3.13	4.83

Note: Denotes, among respondents reporting that in case of an emergency it is very possible, somewhat possible, or not very possible for them to come up with 1/20 of GNI per capita in local currency, the percentage who choose money from (source reported in the heading) as their main source of this money (% able to raise funds, age 15+). Percentages may not sum 100%.

Source: Global Findex, World Bank 2014.

Conclusion

This paper has addressed the status of financial education and financial inclusion in BRICS countries where inequality and poverty are still present. According to the standard view, financial access is an avenue to improve population well-being but the lack of hard evidence challenges such goal. It is argued that financial inclusion must be paired with financial literacy to improve people's financial capabilities. In order to review how BRICS countries are managing such topics, data from the Standard & Poor's Ratings Services Global FinLit Survey 2014 were used to analyze financial literacy and the Global Financial Inclusion (Global Findex).

Database 2014 and the Financial Access Survey 2015, to examine the financial inclusion. According to UFA 2020, although extending access to finance may be the first building block for people to build a better life, financial literacy in BRICS countries, is generally low. In fact, no more than 5 out of 10 people in BRICS countries answer correctly basic questions of financial issues that call for national strategies on these issues that have been implemented in the last few years. On one hand, such strategies might induce valuable effects in the medium term and, on the other hand, the persistence of an 'educated' financial behavior in the long run will have to be measured.

Furthermore, as the results of the strategies for financial education are not yet available, it follows that it is difficult to assess whether people will be capable to use financial instruments and reap the benefits of the financial inclusion; thus, at the moment, the questions about UFA 2020 are still unsolved. As in some national strategies M&E activities are considered, the outlook is positive in this regard as they stand for an ex-ante genuine interest in improving actions and programmes implemented by governments. It is remarkable that most of BRICS countries, especially India, are aware that financial education must be delivered according to beneficiaries situation. After the evaluations, we hope that actions and programmes will be, eventually, modified accordingly. This is, government and experts involvement must assess these programmes during all phases. Last but not least, political will is paramount for achieving national strategies' goals, focusing on closing the financial education gender gap too. Alongside the efforts devoted to financial inclusion, an institutional framework to prevent financial abuses and predatory practices is also needed.

BRICS' financial institutions are used mostly for saving. Indeed, savings are important, especially for poor people, but also credit may provide additional benefits when being properly managed. Overall, data reveal that financial access has improved in BRICS countries between 2011 and 2014, but measuring the quality of higher access is still an issue. It could be that people would continue resorting to family and friends and other informal source of funds in case of emergency until the financial sector will provide tailored financial instruments.

So far, emphasis has been put on financial indicators referring to usage and access; comparable information for quality and impact ones is scarce or unavailable for many countries. However, the last set is probably as much important as the former one, or even much more than that.

References

Atkinson, A. and Messy, F. (2012). Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study. *OECD Working Papers on Finance, Insurance and Private Pensions*, 15.

Bateman, M. (2010). *Why microfinance doesn't work? The destructive rise of local neoliberalism*. London: Zed Books.

Cohen, M. and Sebstad, J. (2003). Financial Education for the Poor. *Working Paper*, 1. Washington, D. C.: Microfinance Opportunities

Demirgüç Kunt, A., Klapper, L. F., Singer, D. and Van Oudheusden, P. (2015). The Global Findex Database 2014: measuring financial inclusion around the world. *World Bank Policy Research Working Paper*, 7,255.

Dichter, T.W. and Harper, M. (Eds.) (2007). *What's wrong with microfinance?*. Rugby: Practical Action Publishing.

Drury, L.L. III. (2009). Predatory Lending and Its Impact on Consumer Credit. *Loyola Journal of Public Interest Law*, *10* (2), 137-148.

Global Partnership for Financial Inclusion (GPFI) (2016). Global Partnership for Financial Inclusion (GPFI) China 2016. *Priorities Paper*. Available in: http://www.gpfi.org/publications/global-partnership-financial-inclusion-gpfi-china-2016- priorities-paper [Retrieved on March 16, 2016]

______(GPFI) (n.d.). G20 Financial Inclusion Indicators. Available in: http://www.gpfi.org/sites/default/files/G20%20Set%20of%20Financial%20Inclusion%20In dicators.pdf [Retrieved on March 16, 2016]

Hilgert, M., Hogarth, J.M., and Beverly, S. (2003). Household Financial Management: The Connection Between Knowledge and Behavior. *Federal Reserve Bulletin,* 89, 309-322.

Hill, R.P. and Kozup, J.C. (2007). Consumer Experiences with Predatory Lending Practices. *The Journal of Consumer Affairs*, *41* (1), 29-46.

Holzmann, R., Mulaj, F. and Perotti, V. (2013). Financial capability in low-and middle-income countries: measurement and evaluation. *Financial Literacy and Education Russia Trust Fund*. Washington, D.C.: The World Bank.

Jeurissen, R. and Van de Ven, B. (2006). Developments in Marketing Ethics. *Business Ethics Quarterly, 16* (3), 427-439.

Klapper, L., Lusardi, A. and Van Oudheusden, P. (2015). *Financial Literacy Around the World: Insights from the Standard & Poor's Ratings Services Global Financial Literacy Survey*. Available in: https://www.mhfi.com/corporate-responsibility/global-financial-literacy-survey [Retrieved March 21, 2016]

Lusardi, A. and Mitchell, O. (2007). Financial Literacy and Retirement Preparedness: Evidence and Implications for Financial Education. *Business Economics, 42* (1), 35-44.

Lusardi, A. (2008). Financial Literacy: An Essential Tool for Informed Consumer Choice? *Working Paper*, 08-11.

Mader, P. (2016). *Questioning Three Fundamental Assumptions in Financial Inclusion* (Evidence Report No. 176). Brighton: Institute of Development Studies.

Organisation for Economic Cooperation and Development (OECD) (2005). *Improving Financial Literacy – Analysis of Issues and Policies*. Paris: Organisation for Economic Cooperation and Development Publications.

______(2013). *Advancing national strategies for financial education*. Paris: Organisation for Economic Cooperation and Development Publications.

Raccanello, K. (2013). Predatory microfinance. In A. Rajmani Singha. *Financial Inclusion for Inclusive Growth*. (226-239). New Delhi: Concept Publishing Company Pvt. Ltd.

Russian Federal State Statistics Service (Rossstat) (2015). *BRICS Joint Statistical Publication 2015*. Moscow: Information and Publishing Centre "Statistics of Russia". Available in: http://www.gks.ru/free_doc/doc_2015/BRICS_ENG.pdf [Retrieved on March 18, 2016]

Stango, V. and Zinman, J. (2009). Exponential Growth Bias and Household Finance. *Journal of Finance, 64* (6), 2,807-2,849.

World Bank (2012). *Financial inclusion strategies: reference framework*. Washington, D.C.: The World Bank.

______(2016). *UFA 2020 Overview: Universal Financial Access by 2020*. Available in: http://www.worldbank.org/en/topic/financialinclusion/brief/achieving-universal-financial-access-by-2020 [Retrieved on March 16, 2016]

U.S. Department of Housing and Urban Development (US-HUD) (2001). *Curbing Predatory Home Mortgage Lending*. Washington, D.C.: HUD-Treasury Task Force on Predatory Lending.