FINANCIAL INCLUSION IN THE REPUBLIC OF MOLDOVA: RECENT IMPACTS AND EVIDENCE

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Abstract

This paper analyses the relationships between remittances and financial inclusion in the Republic of Moldova. Using a dataset are created the linear regression models, that show the interdependency of the level of the remittances and the level of financial inclusion. It is also mentioned that the level of financial education places an important role in using financial services. From the policy perspective, is suggested that the Government has to implement the National Financial Inclusion Strategies in order to elaborate an action plan that takes into account all the ways for increasing the level of financial inclusion.

Keywords: *financial inclusion, financial development, remittances, government securities*

JEL classification: *C58, D14, D53, G10*

1. Introduction

Over the last few decades, financial inclusion has become a substantial topic in many countries, because it is an important determinant of economic growth and poverty reduction. The importance of financial inclusion arises from the problem of financial exclusion of about 1.7 billion people in 2017 according to The Global Findex Database (2017). Even in 2010, at the Group of Twenty (G20) Summit in Seoul, the Leaders of the G20, recognized financial inclusion as one of the main pillars of the global development agenda and endorsed a concrete Financial Inclusion Action Plan.

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This paper shows the methodology of evaluating the level of financial inclusion. The calculation of the index of financial inclusion allows us to evaluate the results in the dynamics and to determine the weak points that are needed to be improved. Based on this background, this study attempts to measure financial inclusion in the Republic of Moldova, to examine the details of the relationship between the remittances and the financial inclusion, use of financial services, showing the preferences of investors between government securities and commercial bank deposits. Following the research, it is observed that the level of remittance in the Republic of Moldova influences positively the use of financial services: investing in government securities and commercial banks deposits.

2. Literature review

There are many possible ways in which financial inclusion could be defined, which touch to some degree on access, use, quality, cost of the financial services. According to the World Bank (2008), financial inclusion, suggests the absence of price and non-price barriers when using financial services. In another report of the World Bank (2014), financial inclusion is defined as the share of individuals and firms that use financial services. Economic and Social Commission for Western Asia (2021) uses a more complex definition as the provision of affordable financial services to disadvantaged and low-income segments of society, as opposed to financial exclusion when these services are unavailable or expensive. Another definition in Global Standard-Setting Bodies and Financial Inclusion for the Poor (2011) refers to a state when all working age adults have effective access to loans, savings, payments, and insurance from formal service providers. The Banking Association of South Africa defines financial inclusion as access and use of a wide range of affordable and high quality financial services and products, in an appropriate but simple and dignified manner with respect to customer protection. Accessibility should be accompanied by usage which should be supported through the financial education of clients. In other words, when large parts, or specific subsets, of a country's population are denied access to financial services, their ability to insure themselves against shocks or save for educational, entrepreneurial, or retirement purposes may be inhibited. Exclusion from the financial system may therefore exacerbate the economic vulnerability of particular segments of society: those living in poverty, women, rural communities, and those without a stable and well-paid job in the

formal sector (Transition Report, 2016). Thus, financial inclusion is the process of ensuring that individuals, especially poor people have access to basic financial services in the formal financial system (Allen et al. 2016; Ozili, 2018). An explicit definition is according to Sahay et al. (2015) that define financial inclusion as the access to and use of formal financial services by households and firms.

What affects financial inclusion? There is extensive literature that explores the relationships between remittances and financial inclusion. An earlier study, such as Aggarwal et al. (2006) shows that the size of remittance flows into a country – scaled by its GDP – has a positive impact on the ratios of bank deposits and credit to GDP. Ben et al. (2020) find that when the remittance-to-GDP ratio is high, above 13% on average, they tend to complement formal access and usage channels, thus enhancing financial inclusion. Generally, remittances are positively and significantly correlated with whether a household has a bank account or savings account but find no significant correlation with whether a household requests a loan. Remittances can affect positively financial inclusion in at least two ways. Firstly, remittances might increase the demand for savings instruments (Anzoategui et al., 2014; Misati et al., 2019; Muktadir-Al-Mukit and Islam, 2016). Secondly, remittances might increase the recipients' chances of obtaining a loan from formal financial institutions (Anzoategui et al., 2014). However, remittances inflow has a negative impact on financial inclusion for countries with a low level of remittance and a positive one for countries with a high level of remittances (Issabayev et al., 2020). The research of Kokorović et al. (2020) that investigates the effects of remittances on increasing savings and financial inclusion of youth in South East Europe shows the negative impact of remittances on youth financial inclusion in having debit card, credit card, and borrowing. On the other hand, results show positive effects of remittances on savings among youth that receive remittances.

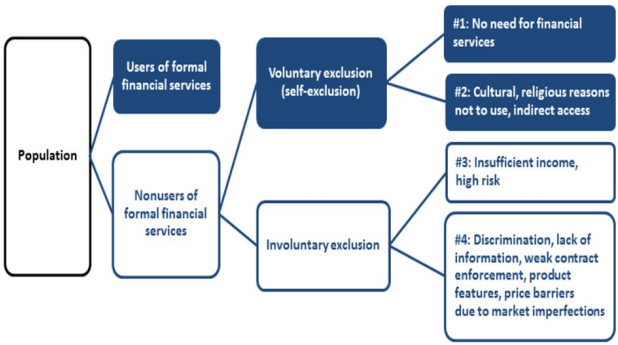
Remittances and financial inclusion could be considered as drivers for development. Attracting additional remittances could fuel the inclusion of a financial system, which, in turn, is important for economic development (Tu et al., 2019). For the countries with low income, remittances are finance of last resort used mostly for subsistence expenses, for the countries with medium income, the remittances are a part of a diversified portfolio of finance (Julca, 2013) and can stimulate the financial sector if the amounts received are saved (Aggarwal et al., 2010). Taking into consideration that remittances have an

impact on development and financial inclusion, according to the research of IFAD, World Bank, G20, and GPFI (2015) it is imperative that governments and the private sector explore ways to maximize this impact by scaling up successful policies and models.

3. Results and Discussion

When people participate in the financial system, they are better able to invest in education, start and expand their business, manage risks and absorb financial shocks (Bruhn, 2014; Burgess et al., 2005; Dev, 2006; Dupas, Robinson, 2013). Why do people not use formal financial services? To answer this question will help Figure 1, which provides a visual framework for thinking about financial inclusion. We begin with the entire population, generally taken to be above the age of 15.

Figure 1: Use of and Access to Financial Services



Source: Global Financial Development Report 2014

Among the excluded population-those not using formal financial services-some choose not to do so, either because (Box 1) they feel they do not need financial services (one significant part of this group comprises those who have access to financial services through a family member, and therefore do not need to have their own account, for example) or (Box 2) because of cultural or religious reasons. Another reason for voluntary exclusion could be the lack of trust or the understanding of the financial services. The main policy arena will be in involuntary exclusion: those individuals and firms that would like to use financial services but cannot. Out of these, some (Box 3) have insufficient income or are of such a high risk that a prudent financial system

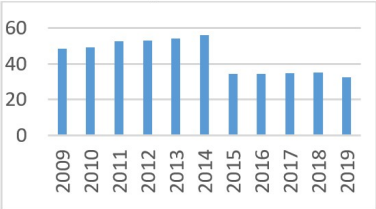
excludes them. Among low-income excluded individuals are those who only demand small services (small loans, savings, etc.) that do not warrant the fixed costs implicit in financial intermediation. The policy should generally not try to include these individuals and firms into the system. That leaves Box 4, those who are excluded because of different types of market failures, as listed in the Box (they also include geographical remoteness). This is where policy should focus efforts to promote financial inclusion.

How to measure financial inclusion is a topic of concern among researchers, governments, and policymakers. Financial inclusion measurement has been mainly approached by the usage and access to the formal financial services by using supply-side aggregate data (Honohan, 2007; Sarma, 2008; Sarma, 2012; Chakravarty, 2010). Therefore, to evaluate the level of financial inclusion, besides the usage and access to financial services is measuring one type of indicator more – quality.

According to the G20, financial inclusion is measured in three dimensions: (i) access to financial services, (ii) usage of financial services, and (iii) quality of the products and the service delivery. These indicators periodically are updated because of the development of financial technology. *Access indicators* reflect the depth of outreach of financial services, such as the penetration of bank branches or point of sale devices in rural areas, or demand-side barriers that customers face to access financial institutions, such as cost or information. *Usage indicators* measure how clients use financial services, such as the regularity and duration of the financial product/service over time. *Quality measures* describe whether financial products and services match clients' needs, the range of options available to customers, and clients' awareness and understanding of financial products.

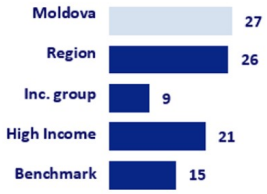
For calculating the level of financial inclusion in the Republic of Moldova, one indicator was evaluated from each dimension. To estimate the access to financial services was taken the number of branches per 100,000 adults in commercial banks (Figures 2 and 3).

Figure 2: Number of branches per 100,000 adults



Source: Financial Access Survey-By Country - IMF Data

Figure 3: Number of branches per 100,000 adults

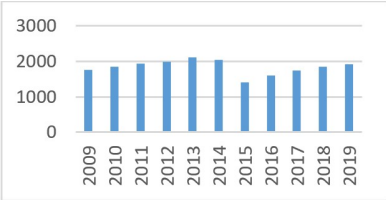


Source: FinStats 2019

As is observed in Figure 2 the number of branches has decreased in the Republic of Moldova. It is explained by the banking crisis, where three banks defaulted at the end of 2014. However, it has almost the same result (Figure 3) as region and high income – 27 branches per 100,000 adults. In comparison with the income group and median statistical benchmark, the result is higher.

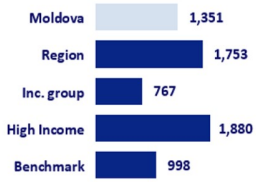
For evaluation the usage indicator was taken a number of depositors with commercial banks per 1,000 adults in commercial banks (Figures 4 and 5).

Figure 4: Accounts per 100,000 adults



Source: Financial Access Survey-By Country-IMF Data

Figure 5: Accounts per 1,000 adults



Source: FinStats 2019

As is shown in Figure 4 the number of deposit accounts with commercial banks decreased dramatically in 2015, which is also explained by the banking crisis. The result (Figure 5) is close to the results of the region and high income, and higher than the results of income group and benchmark.

For the third dimension was evaluated the indicator getting credit of The Doing Business (2020), which provides objective measures of business regulations and their enforcement across 190 economies and selected cities at

the subnational and regional level. Moldova in 2019 strengthened its secured transaction system by introducing new grounds for relief from an automatic stay during insolvency and restructuring proceedings and has improved its credit information system through a new credit bureau law to facilitate the creation of a private credit bureau.

Remittances in Moldova reach 15.2% of GDP in 2019, hence they constitute an essential part of the Moldovan economy. Personal remittances received by the residents of the Republic of Moldova in 2019 constituted USD 1,816.94 million (+4.2 compared to 2018), which are unchanged from 2018 (NBM, 2019). At the same time, remittance payments to non-residents (debt) were USD 288.69 million, increasing by 12.4%. In the Republic of Moldova the share of the rural population, according to the latest census, reaches 62%, which is higher in comparison to other countries in the region. Taking into consideration that rural localities record lower incomes, higher poverty rates, lower employment rates, and lower health and education indicators, remittances contribute to increasing the level of financial inclusion.

4. Data and the Empirical Model

For the purposes of the research of the link between remittances and the level of financial inclusion, the data for the Republic of Moldova was collected through the International Monetary Fund's Financial Access Survey (2019), which is the key source of the global-side data on financial inclusion, encompassing data on access to and usage of financial services by firms and households that can be compared across countries and over time. Additionally, was used the data of the World Bank, Personal remittances, received (current USD) (2019) and the data for the government securities was gathered from the website of the Ministry of Finance in the Republic of Moldova (2019).

Based on 16 observations The author has found the following regression models that show the impact of remittances on financial inclusion, especially the use of financial services, investing in government securities or commercial deposits:

$$OGS = 5375.135 + 6.672 \times REM - 279.89 \times NCB \quad (1)$$

$$NDB = 187.508 + 0.271 \times REM + 15.241 \times NCB \quad (2)$$

Where: REM – personal remittances, received; NCB – number of commercial bank branches; OGS – outstanding of government securities; NDB – number of deposit accounts with commercial banks.

The test statistic of the obtained linear regression models has shown that the determinant coefficients are relatively high, being represented in Figures 6 and 7:

Figure 6: The test statistic of the linear regression model of the equation 1

Equation: EQ07 Workfile: FINANCIAL_INCLUSION::Financi...

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: NDB
Method: Least Squares
Date: 05/22/21 Time: 20:45
Sample: 2004 2019
Included observations: 16

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	187.5076	128.8056	1.455741	0.1692
REM	0.270782	0.062888	4.305761	0.0009
NCB	15.24081	3.145746	4.844894	0.0003

R-squared	0.858428	Mean dependent var	1288.650
Adjusted R-squared	0.836647	S.D. dependent var	220.8888
S.E. of regression	89.27641	Akaike info criterion	11.98871
Sum squared resid	103613.6	Schwarz criterion	12.13357
Log likelihood	-92.90970	Hannan-Quinn criter.	11.99613
F-statistic	39.41294	Durbin-Watson stat	1.363426
Prob(F-statistic)	0.000003		

Source: Author's own work

Figure 7: The test statistic of the linear regression model of the equation 2

Equation: EQ07 Workfile: FINANCIAL_INCLUSION::Financi...

View | Proc | Object | Print | Name | Freeze | Estimate | Forecast | Stats | Resids

Dependent Variable: NDB
Method: Least Squares
Date: 05/22/21 Time: 20:45
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Source: Author's own work

Results show that remittances have a positive impact on government securities and deposits on commercial banks. This is explained by the investing savings of the people remaining after all expenses have been made. More remittances mean more investment. The number of commercial branches influences positively the number of deposit accounts. More branches lead to an increase in the access of banking services. Vice versa is in the case of government securities. This is explained by the competitive struggle between bank deposits and government securities. According to the local legislation (2018) individuals and legal entities, resident or non-resident of the Republic of Moldova may participate in the auctions for buying government securities only through primary dealers, which are nine commercial banks. They are not interested in the promotion of the government securities and investors for buying debt securities have to address at the headquarters and only in the capital, because the bank workers from branches direct them to address there. That is why the number of commercial bank branches has a positive influence on the number of deposit account and a negative on government securities.

5. Conclusions

Financial inclusion plays a very important role in increasing the quality of life of citizens. Greater financial inclusion is not necessarily better. As was mentioned, there is a variety of concepts used to understand financial inclusion. The most important thing is the use of financial services, not only access to them. According to the methodology of the evaluation the level of

financial inclusion, all three dimensions are good enough in the Republic of Moldova and still, there is a space for getting better.

Generally, developing countries are the major beneficiaries of remittances. Remittances provide regular inflows into household budgets. They are mostly spent on basic necessities such as food, clothing, and shelter but once these are covered, the remainder can be used for savings and investments. The availability of money is as important as the level of financial education that contributes to increasing the level of use of financial services.

Remittances have a significant effect on the use of financial services, commercial deposits, and government securities. The elaborated models show the competition between these financial instruments. They do not have to complement each other but to develop without negatively influencing one other. Another important thing is to increase the level of financial education because people can have savings but not know what to do with them. For increasing the level of financial inclusion the Government of the Republic of Moldova has to implement and develop the National Financial Inclusion Strategies to ensure that resources, especially remittances, and actions are put in place to achieve those commitments.

6. References

- Aggarwal, R.; Demirgüç-Kunt, A. & Pería, M. S. M. (2010*)* Do remittances promote financial development? *Journal of Development Economics,* 96 (2), p. 255-264.
- Aggarwal, R.; Demirguc-Kunt, A.; Martinez Pería, M. S. (2006) Do Workers' Remittances Promote Financial Development? World Bank Policy Research Working Paper, 3957.
- Allen, F.; Demirguc-Kunt, A.; Klapper, L. & Martinez Peria, M. S. (2016) The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation*, 27, p.1-30.
- Anzoategui, D.; Demirguc-Kunt, A.; Martinez Peria M. (2014) Remittances and financial inclusion: Evidence from El Salvador. *World Development*, 54(C), p. 338-349.
- Ben N.; S., Chaimi; R. & Trabelsi, M. (2020) Do remittances Enhance Financial Inclusion in LMICs and Fragile States? IMF Working Paper.

- Bruhn, M., & Love, I. (2014) The real impact of improved access to finance: Evidence from Mexico. *The Journal of finance*, 69(3), p. 1347-1376.
- Burgess, R.; Pande, R., & Wong, G. (2005) Banking for the poor: Evidence from India. *Journal of the European Economic Association*, 3(2-3), p. 268-278.
- Chakravarty, S. & Rupayan P. (2010). Measuring Financial Inclusion: An Axiomatic Approach. Indira Gandhi Institute of Development Research, *Working Paper* no. WP 2010/003.
- Decision no. 170/2018 of Executive Board of National Bank of Moldova on the Approval of the Regulation on Placement, Transaction and Redemption of State Securities in Book-Entry Form.
- Doing Business (2020). Available at https://www.doingbusiness.org/content/dam/doingBusiness/country/m/moldova/MDA.pdf.
- Financial Access Survey - By Country - IMF Data.
- IBRD (2017) Financial inclusion, Transition Report 2016-17, TRANSITION FOR ALL: EQUAL OPPORTUNITIES IN AN UNEQUAL WORLD.
- GPFI (2011) Global Standard-Setting Bodies and Financial Inclusion for the Poor, A White Paper Prepared by CGAP on Behalf of the G-20's Global Partnership for Financial Inclusion.
- Honahan, P. (2007) Cross-Country Variation in Household Access to Financial Services. World Bank Paper Conference on "Access to Finance".
- Issabayev, M.; Saydaliyev, H.; Avsar, V.; Chin, L. (2020) Remittances, institutions and financial inclusion: new evidence of non-linearity. *Global Economy Journal*, 20 (1), p. 1-19.
- Julca, A. (2013) Can immigrant remittances support development finance? *Panoeconomicus*, 3, p. 365-380.
- Kokorović Jukan, M.; Okičić, J. & Hopić, D. (2020) Remittances as an opportunity to increase savings and financial inclusion of youth in South East Europe. *Economic Research-Ekonomska Istraživanja*, 33 (1), p. 2606-2619.

- Misati, R.N.; Kamau, A.; Nassir, H. (2019) Do migrant remittances matter for financial development in Kenya? *Financial Innovation*, 5(1), p. 31.
- Muktadir-Al-Mukit, D.; Islam, N. (2016) Relationship between remittances and credit disbursement: a study from Bangladesh. *Journal of Business and Management Research*, 1(1), p. 39-52.
- Ozili, P. K. (2018) Impact of digital finance on financial inclusion and stability. *Borsa Istanbul Review*, 18, p. 329–340.
- Personal remittances, received (current US$) | Data (worldbank.org) (2019).
- Sahay, R.; Papa N'Diaye; Adolfo B.; Srobona M.; Annette K.; Yen N. M. & Seyed R.Y. (2015) Financial Inclusion: Can it Meet Multiple Macroeconomic Goals? *IMF Staff Discussion Note* 15/17.
- Sarma, M. (2012) Index of Financial Inclusion A measure of financial sector inclusiveness. *Berlin Working Papers on Money, Finance, Trade and Development,* Working Paper no. 07/2012.
- Sarma, M. (2008) Index of Financial Inclusion. *ICRIER Working Paper* 215.
- Tu, C. A.; Phi, N. T. M.; Tuan, L. Q.; Yoshino, N.; Sarker T.; Taghizadeh-Hesar F. (2019) Remittance Inflows, Financial Inclusion, and Economic Development: An Empirical Analysis of the World Sample. *ADBI Working Paper* 1000. Tokyo: Asian Development Bank Institute.
- United Nations Economic and Social Commission for Western Asia (2021) Available at https://www.unescwa.org/inclusive-financing.
- World Bank (2008) Finance for all? Policies and pitfalls in expanding access. Available at http://documents1.worldbank.org/curated/en/932501468136179348/pdf/417920PAPER0Fi18082137291301PUBLIC1.pdf
- World Bank (2014) Global Financial Development Report 2014: Financial Inclusion. Washington, DC: *World Bank*. License: Creative Commons Attribution CC BY 3.0.
- World Bank (2018) The Global Findex Database 2017, Measuring Financial Inclusion and the Fintech Revolution. Washington, DC: *World Bank*.