

A Study Global Findex Report 2021 : Analyzing the Level of Financial Inclusion¹

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Abstract

The GFD has served as the authoritative source of information on global access to financial services (FS). It provides almost 300 indicators such as saving, credit, account ownership, borrowings, money banking etc. The latest GFD was published in 2021. The reason for this research is to analyze the degree of financial inclusion (FI) across different segment factors as revealed in the GFD in various years, viz. 2011, 2014, 2017, and 2021. Descriptive and Anova have been used to analyse the data. According to the findings, there are no appreciable differences among the financial institution's account holders across various demographics. However, a significant difference is observed in Mobile bank account holders in the years 2011, 2014, 2017, and 2021 for different demographics which shows that the world is shifting towards digital financial inclusion (DFI).

JEL Code : G21, G23, G28, F65

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I. Introduction

FI IS THE most common way of guaranteeing that all individuals approach fundamental FS through taking part in the formal financial framework (Ozili, 2018). FI upgrade account proprietorship and credit access for people, permitting them to burn through cash for utilization, medical care for their love ones, education, and investment funds (Allen , Demirguc-kunt, Klapper and Peria, 2016). Numerous factors, such as high transaction costs for financial intermediation and willful financial rejection (Ozili, 2018),

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young adults, older adults, primary education, secondary education, income poorest, and income richest in 2011, 2014, 2017, and 2021, whereas a significant difference is observed in Mobile bank account holders in 2011, 2014, 2017, and 2021 for males, females, young adults, older adults, primary education, secondary education, income poorest, and income richest. Thus, the results demonstrate that from 2011 to 2021, there is a rise in access to and use of digitalized FS. These discoveries infer that financial institutions ought to focus on expanding their digital services to satisfy the developing need for portable banking among different segment gatherings and that states ought to investigate moves toward advance FI through digital channels. This suggests that financial institutions ought to focus on fostering their portable financial services to contact a more extensive crowd and satisfy the developing demand for digitalized financial services. Likewise, the extra review may be embraced to investigate the causes behind the reported contrasts in portable ledger holders across other segment classifications.

References

- Agarwal, Aman and Krishna Nath Pandey, (2023), "Financial Inclusion through Central Bank Digital Currency (Digital Rupee) : A Survey based Empirical Study", *Finance India*, September 2023, Vol 37, No 3, pp 773-812
- Agarwal, Aman and Yamini Agarwal, (2020), "Developing the Banking System Stability Index (BSSI): Comparison and Ranking of Banking System of 127 Countries", *Finance India*, December 2020, Vol. 34, No 4, pp 1219-1270
- Agarwal, Aman and Yamini Agarwal, (2022), "Demonitisation : A 5 year Journey of Reforms and Progress in India" Lead Chapter No 1 in edited book by Sasmita Agarwal, Agarwal & Agarwal; Demonetisation : An Empirical Study Rani Samanta, J.P. Mahajan, Sanjeev Mehta and Ravi Kant Swami in "Demonitisation and the Indian Economy : 5 Years Hiccups and Achievements", Presetige Publishers, Delhi, India, pp. 1 to 47
- Agarwal, Aman and Yamini Agarwal, (2023), "Strengthening the Financial Sector", *Yojana (GOI)*, March 2023, Vol. 67, No 3, pp 49-53 (Invited Article on Analysis of Union Budget 2023).
- Agarwal, Aman, (2017), "CSO figures brings in positive vibes as GDP bounces back", *The Week*, November 30th, 2017
- Agarwal, J. D., (1969, 1988), "Capital Budgeting Decision under Risk and Uncertainty", IIF Publications, Delhi, India, 1988; Doctoral Thesis Work done at Delhi School of Economics, The University of Delhi, Delhi 1969.
- Agarwal, J.D, Yamini Agarwal, Manju Agarwal and Aman Agarwal, (2023), "Trust as a Financial Value", *Finance India*, Vol. 37, No.3, September 2023 pp. 665-678
- Agarwal, J.D. & Yamini Agarwal, (2017), "Analysis of Union Budget 2017", *Finance India*, Vol. XXXI No. 1, March 2017
- Agarwal, J.D. and Aman Agarwal, (2005), "Inflation, Savings and Financial Development", *Finance India*, Vol XIX No 2, June 2005

Agarwal, J.D. and Aman Agarwal, (2006), "Money Laundering : New Forms of Crime Victimization (Current Trends and Modus Operandi)", *Finance India*, Vol. 19 No 4, December 2006. Keynote address delivered at the National Workshop on New Forms of Crime Victimization with reference to Money Laundering, organized by the Indian Society of Victimology, Department of Criminology, University of Madras, Chepauk, Chennai, INDIA, on 18th November 2006 to senior officials from the government, judiciary, intelligence and enforcement agencies in India and outside.

Agarwal, J.D. and Aman Agarwal, (2007), "Climate Change, Energy and Sustainable Development", *Finance India*, Vol XXI No 4, December 2007 Invited delivered as invited Opening Keynote Address at the Global Forum 2007 in Goteburg, SWEDEN (November 5th, 2007) and discuss at Swedish Parliament in Stockholm (November 10-11th, 2007)

Agarwal, J.D. and Aman Agarwal, (2022), "Facilitating India@100"*, *Yojana (GOI)*, April 2022, Vol 66 No 4, pp 55-59 (Invited Article on analysis of Union Budget 2022)

Agarwal, J.D., (2017), "Sustainable Growth, Innovation and Revolution in the new Millennium" delivered as invited Chief Guest Keynote Address at 20th International Conference hosted by Research Development Association and Rajasthan Chamber of Commerce & Industry at Hotel Clarks Amer, Jaipur on March 25th, 2017.

Agarwal, J.D., (2017), "Innovation, Disruption and Transformation in Financial Markets", delivered as invited Keynote Address at ICFAI Business School (IBS) Mumbai on 7th April 2017.

Agarwal, J.D., Manju Agarwal, Aman Agarwal & Yamini Agarwal, (2017), "Theory of Land and Efficient Land Markets through Real Estate Exchange", *Finance India*, Vol XXXI, No 2, June 2017

Agarwal, J.D., Manju Agarwal, Aman Agarwal & Yamini Agarwal, (2017), "Theory of Employment, Wealth and Efficient Labour Market through National Labour Exchange (NLX)", *Finance India*, Vol XXXI, No 3, September 2017; Invited to be delivered as (a) Guest of Honour Plenary Keynote Address at Saint Petersburg State University of Aerospace Instrumentation (SUAI) International Week Opening Ceremony Session from May 22-26th, 2017 at St. Petersburg, Russia; (b) as Plenary Keynote Address at Bilateral International Conference FIM & ISME 2017 [26 Int. Conf. Forum of Interdisciplinary Mathematics & Int. Symposium on Mgt Engg. 2017] from August 25-28, 2017 at KICC Kokura, Kitakyushu City, Fukuoka, Japan ; (c) as Guest of Honour Address at Universiti Teknologi PETRONAS, Malaysia in Nov 2017 at Perak Darul Ridzuan, MALAYSIA; (d) as Guest of Honour Plenary Keynote Address at the 10th International Finance Conference 2018 in Tunisia in April 2018 along with other Plenary Speakers - Prof. Harry M. Markowitz (Nobel Prize Laureate 1990); Prof. Giovanni Barone-Adesi (UoL, Switzerland); Prof. Oldrich Alfons Vasicek (VA USA); Prof. Nizar Touzi, (EP, France); Farid Aitsahlia (UFL, USA)

Agarwal, J.D., Yamini Agarwal and Aman Agarwal, (2022), "Ranking World Economies based on Fintech Vertical Opportunity Index (FVOI)", *Finance India*, December 2022, Vol 36 No 4, pp 1173-1192

Agarwal, Yamini and Aman Agarwal, (2022), "Financial Inclusion and Financial Development in World Economies using IMF Global FIndex Survey Data", *Finance India*, September 2022, Vol 36 No 3, pp. 889-906

Agarwal, Yamini and Aman Agarwal, (2023), "Analysis of Union Budget 2023-24 : India@100 eduring Transparency, Accountability and Sustainability", Finance India, March 2023, Vol 37 No 1, pp. 23-38

Agarwal, Yamini, (2010), "Capital Structure Decisions under Multiple Objectives: A study of Indian Corporates", Finance India, Vol. 24 No. 2, June 2010, pp. 515-523

Agarwal, Yamini, (2013), "Capital Structure Decisions: Evaluating Risk and Uncertainty" John Wiley & Sons, USA (Wiley USA, UK & Singapore)

Agarwal, Yamini, K.C. Iyer and Surendra S. Yadav, (2009), "Capital Structure Decision: A Behavioral Study on Multiple objectives framework", Finance India, Vol. 23, No. 2, June, 2009, pp 431-468.

Agarwal, Yamini, K.C. Iyer and Surendra S. Yadav, (2012) "Multi-objective Capital Structure Modeling: An Empirical Investigation of Goal Programming Model Using Accounting Proxies", Journal of Accounting, Auditing and Finance, Vol. 27, No.3, July 2012, pp. 359-385.

Agarwal, Yamini, (2013), "Capital Structure Decisions Evaluating Risk and Uncertainty", John Wiley and Sons, New York and Singapore, 2013

Agarwal, Yamini, (2013), "Capital Structure Decisions under Multiple Objectives : A Study of Indian Corporates", IIF Publication, Delhi, 2013

Allen, F., A. Demirgüç-Kunt, L. Klapper and M.S.M. Peria, (2016), "The foundations of financial inclusion: understanding ownership and use of formal accounts", *Journal of Financial Intermediation*, Vol. 27, No. 1, pp. 1-30.

Aslan, Goksu, Corinne Deléchat, Monique Newiak and Fan Yang, (2017), "Inequality in financial inclusion and income inequality", *IMF Working Papers WPI/17/236*, International Monetary Fund.

Balasubramanian, P., S.R. Chandra, A. Murlidharan and P. Tantri, (2019), "Fintech for the Poor: Do Technological Failures Deter Financial Inclusion?", *Best Evidence in Chinese Education*, Vol. 4, No. 2, pp 489-504.

Banerjee, A. V., and A.F. Newman, (1993), "Occupational choice and the process of development", *Journal of political economy*, Vol. 101, No. 2, pp.274-298.

Batista, C. and P.C. Vicente, (2020), "Improving access to savings through mobile money: experimental evidence from African smallholder farmers", *World Development*, Vol. 129, No. 1 pp. 1-17.

Bazarbash, M., J. Moeller, N.N. Griffin, H.C. Villanova, E. Chhabra, Y. Fan and K. Shirono, (2020), "Mobile Money in the COVID-19 Pandemic", Monetary and Capital Markets, *International Monetary Fund*, Vol. 1, No. 1, pp. 1-9.

Chen, R., and R. Divanbeigi, (2019), "Can Regulation Promote Financial Inclusion?", World Bank Policy Research, Working Paper No. 8711.

Chibba, M., (2009), "Financial inclusion, poverty reduction and the millennium development goals", *The European Journal of Development Research*, Vol. 21, No. 2, pp.213-230.

Dermish, A., C. Kneiding, P. Leishman and I. Mas, (2011), "Branchless and mobile banking solutions for the poor: a survey of the literature", *Innovations*, Vol. 6, No. 4, pp. 81-98.

Emara, N., and A. El Said, (2021), "Financial inclusion and economic growth: The role of governance in selected MENA countries", *International Review of Economics and Finance*, Vol. 75, No. 1, pp. 34-54.

Galor, O., and J. Zeira, (1993), "Income distribution and macroeconomics", *The review of economic studies*, Vol. 60, No. 1, pp. 35-52.

Grohmann, A., (2018), "Financial literacy and financial behavior: evidence from the emerging Asian middle class", *Pacific-Basin Finance Journal*, Vol. 48, No. 1, pp. 129-143.

Honohan, P., (2008), "Cross-country variation in household access to financial services", *Journal of Banking and Finance*, Vol. 32, No.11, pp. 2493-2500.

Huang, Y., and Y. Zhang, (2020), "Financial inclusion and urban-rural income inequality: Long-run and short-run relationships", *Emerging Markets Finance and Trade*, Vol. 56, No. 2, pp. 457-471.

Jungo, J., M. Madaleno and A. Botelho, (2022), "The relationship between financial inclusion and monetary policy: a comparative study of countries in Sub-Saharan Africa and Latin America and the Caribbean", *Journal of African Business*, Vol. 23, No. 3, pp.794-815.

Khan, M., and I. Ozturk, (2021), "Examining the direct and indirect effects of financial development on CO2 emissions for 88 developing countries", *Journal of environmental management*, Vol. 293, No. 1, pp. 1-12.

Khan, N., M. Zafar, A.F. Okunola, Z. Zoltan and M. Robert, (2022), "Effects of Financial Inclusion on Economic Growth, Poverty, Sustainability, and Financial Efficiency: Evidence from the G20 Countries", *Sustainability*, Vol. 14, No. 19, pp 1-19.

Le, T. H., A.T. Chuc and F. Taghizadeh-Hesary, (2019), "Financial inclusion and its impact on financial efficiency and sustainability: Empirical evidence from Asia", *Borsa Istanbul Review*, Vol. 19, No. 4, pp. 310-322.

Le, Thai-Ha, Ha-Chi Le, and Farhad Taghizadeh-Hesary, (2020), "Does financial inclusion impact CO2 emissions? Evidence from Asia", *Finance Research Letters*, Vol. 34, No. 1, pp 1-7.

Mookerjee, R., and P. Kalipioni, (2010), "Availability of financial services and income inequality: The evidence from many countries", *Emerging Markets Review*, Vol. 11, No. 4, pp 404-408.

Musau, S., S. Muathe and L. Mwangi, (2018), "Financial inclusion, bank competitiveness and credit risk of commercial banks in Kenya", *International Journal of Financial Research*, Vol. 9, No. 1, pp 203-218.

Owen, A. L., and J.M. Pereira, (2018), "Bank concentration, competition, and financial inclusion", *Review of development finance*, Vol. 8, No. 1, pp 1-17.

Ozili, P.K. (2018), "Impact of digital finance on financial inclusion and stability", *Borsa Istanbul Review*, Vol. 18, No. 4, pp. 329-340.

Ozili, P. K., (2021), "Financial inclusion research around the world: A review", *Forum for social economics*, Vol. 50, No. 4, pp. 457-479.

Ozili, P.K., (2020), "Theories of Financial Inclusion: Finance, Insurance and Risk Management Theory and Practice", *Emerald Publishing Limited Bingley UK*, pp. 89-115.

Pal, S., and I. Bandyopadhyay, (2022), "Impact of financial inclusion on economic growth, financial development, financial efficiency, financial stability, and profitability: international evidence", *SN Business and Economics*, Vol. 2, No. 9, pp 1-29.

Park, C. Y., and R. Mercado Jr, (2018), "Financial inclusion, poverty, and income inequality", *The Singapore Economic Review*, Vol. 63, No. 1, pp. 185-206.

Pelletier, A., S. Khavul and S. Estrin, (2020), "Innovations in emerging markets: the case of mobile money", *Industrial and Corporate Change*, Vol. 29, No. 2, pp 395-421.

Polillo, S., (2011), "Wildcats in banking fields: the politics of financial inclusion", *Theory and Society*, Vol. 40, No. 4, pp. 347-383.

Riley, E., 2018, "Mobile money and risk sharing against village shocks", *Journal of Development Economics*, Vol. 135, No. 1 pp 43-58.

Sahay, Ratna, Martin Cihak, N'Diaye, Adolfo Barajas, Srobona Mitra, Annette Kyobe, Yen Mooi and Reza Yousefi, (2015), "Financial inclusion: can it meet multiple macroeconomic goals?", Staff Discussion Notes, International Monetary Fund, Vol. 15, No. 17, pp 33.

Shen, Yan, C. James Hueng, and Wenxiu Hu, (2019), "Using digital technology to improve financial inclusion in China", *Applied Economics Letters*, Vol. 27, No. 1, pp. 1-5.

Tuesta, David, Gloria Sorensen, Adriana Haring and Noelia Cámara, (2015), "Financial Inclusion and Its Determinants: The Case of Argentina", BBVA Research, Working Paper no. 15/03 Madrid.

Vo, Duc Hong, Nhan Thien Nguyen, and Loan Thi-Hong Van, (2021), "Financial inclusion and stability in the Asian region using bank-level data", *Borsa Istanbul Review*, Vol. 21, No. 1, pp 36-43.

Wilson, Therese Ann, (2012), "Supporting social enterprises to support vulnerable consumers: the example of community development finance institutions and financial exclusion", *Journal of Consumer Policy*, Vol. 35, No. 2, pp. 197-213.

World Bank Group, (2014), "Global Financial Development Report 2014: Financial Inclusion", The World Bank, Washington, DC., USA

Yawe, Bruno and Jaideep Prabhu, (2015), "Innovation and financial inclusion: a review of the literature", *Journal of Payments Strategy and Systems*, Vol. 9, No. 3, pp. 215-228.

Zins, Alexandra and Laurent Weill, (2016), "The determinants of financial inclusion in Africa", *Review of development finance*, Vol. 6, No. 1, pp 46-57.

Zulkhibri, Muhamed, (2016), "Financial inclusion, financial inclusion policy and Islamic finance", *Macroeconomics and Finance in Emerging Market Economies*, Vol. 9, No. 3, pp. 303-320.