

PILOT STUDY LEADING TO GAP IDENTIFICATION ON DIVERSIFICATION & DIGITAL STRATEGY DEPLOYED BY PAYMENTS BANK IN INDIA

PAWAN KUMAR¹ and Dr. BHAWNA SHARMA²

¹Research Scholar –Management Department, Amity Business School, Amity University, Maharashtra. Email: pawangeetagupta@gmail.com

²Associate Professor & Officiating HoD –Management Department Amity Business School, Amity University, Maharashtra. Email: bsharma@mum.amity.edu

Abstract

New Age tech based banking in India has completely transformed the financial transaction landscape in the country. The digital banks and the fintech institutions are performing complex transactions which was not possible earlier. The latest digital technology has led to increase in user accessibility as well as convenience. The advent of m-ATM, Automatic Teller Machine, Internet banking transaction, Mobile banking transaction, Debit & Credit Card along with innovative products and services in sachetized format has helped revolutionize the whole financial services territory providing maximum comfort as well as multiple options to the last mile customers. Payment banks are —differentiated and niche institutions challenging the existing commercial banking space working towards maximizing banking coverage. They are supporting with online payments, investments, tax payments, utility bill collections, savings, insurance and e-commerce transactions etc. The main purpose of conducting pilot study is to help analyse the relevance and performance on Payments bank especially Digital strategy & Diversification strategy as part of business expansion deployed by commercial as well as Payments bank and come up with gap identification as well as Conceptual framework for Final study .As part of research proposal and deeper analysis ,we need to be able to have complete clarity on given topic and in sufficient information to be worked upon to help answer identified issues. The pilot study was conducted through the use of Google forms which proved to be an ideal way to reach out to a larger audience to test the tools designed and check their reliability and validity. This paper also identifies various factors, which contribute towards digital banking strategy deployed as well as diversification in products and services from Payments bank perspective. In addition, study will examine impact of Digital First Strategy on performance of selected Payments Bank in India and implementation of innovative dimensions in moving away from brick and mortar or traditional /physical banking to business correspondent, expanded rural franchise or virtual alternative model to help standardize service delivery processes resulting in reduction of cost of banking operations. The study will also discuss various digital transformation initiatives by payments bank to address customer convenience and satisfaction by facilitating anytime, anywhere banking along with adoption of innovative payments settlement system to aim for customer delight. The final finding of the pilot study points that in terms of product and service level differentiation innovation and understanding of end consumer requirement is critical and digital advent has resulted in fast tracking formalization of banking sphere. Finally, the study of Digital Initiatives and emergence of Payment Banks as alternative to traditional banking approach will aid all the stakeholders, including Financial Institutions, Policy makers, Regulators & even conduct their activities in the best possible way.

INTRODUCTION

Payment banks have been created by the Reserve Bank of India to help with the cause of encouraging paperless transactions, less cash economy by way of digital remittances in India. Commercial banks were able to have the product and features of Payments bank but because of the overall structure, business segment prioritization and business territories coverage, they were not able to cater to majority rural and semi urban population. RBI came up with the model to be able to cover unbanked villages and promote formal banking across semi urban and rural geography with help of internet banking or assisted banking via business correspondent model. The usage of mobile banking as well as internet banking by last mile customer has helped reduce cost of transaction and less crowd at bank branches.

Majority of Payment banks are live with utility bill collection facility via Bharat bill payment system which has close to around 10,000 plus billers already on boarded and live in their platform to facilitate last mile loan repayment, electricity bill payment, insurance collection etc. with the help of internet or mobile banking as well as assisted banking support by banking facilitator or business correspondent mode. There is still considerable population not using digital banking but even marginal shift towards internet or mobile banking help with cost savings and increase in overall productivity. Government of India as well as Reserve Bank of India has been promoting digital banking in a big way to help with formalization of Indian economy as well as cashless transactions through policy interventions. The entire effort is to help the under privileged and under banked segmental population entry into main stream formal economy where last mile person who is excluded should also be able to experience the fruits of development in economy. The seamless delivery of financial products and services at manageable and affordable cost to financially excluded sections of society is of paramount importance and utmost priority for Indian government to help with equitable and inclusive growth.

Reserve bank of India in the year 2015 came out with niche banking license by way of Payment bank and helped issued 11 such banking license to expedite the cause of financial inclusion by improving grass root level banking penetration. Currently around 6 Payment banks are live and operational. The service gap model consists of five gaps, including customer gap, information gap, policy gap, delivery gap and communication gap and through extensive analysis has been able to come up with the same.

TIMELINES RELATED TO PAYMENT BANK IN INDIA

2013, September: (Nachiket Mor Committee was set up by Reserve Bank of India to study important areas of Financial Inclusion in India. **(Mor Nachiket, 2013)**)

2013, December: Nachiket Mor Committee submitted their final inputs and findings in which they stressed on setting up of Payments Banks to help with last mile transaction and payment remittances to be able to reach out to masses and ultimately help with expediting the cause of Financial Inclusion.

2014, July: The Finance Minister in his speech proposed about coming up with Payment Banks

to help meet the last mile banking requirements of financially excluded small and medium enterprises, uncovered business segments, low income population, migrant cohort and farmers etc.

Jul 2014: Reserve Bank of India subsequently came out with final draft guidelines for setting up Small Finance Banks and Payment banks. **(J.Vaishnavi, N.Shruthi)**

Nov 2014: Reserve Bank of India released important instructions pertaining to licensing of Payment banks along with final list of applicants to apply for the setting of Payment Bank. **(Killawala Alpana, 2014)**

February, 2015: Reserve Bank of India finally came out with first initial short list of close to 100 applicants out of which 72 applications were there for Small finance bank and 41 were for the Payments Bank to be finally considered for license by external committee.

Aug 2015: RBI finally grants first lot of “in-principle” approval to start Payment Bank to these Institutions / Business Groups/ Reputed Individuals namely

- Aditya Birla Nuvo Limited
- Reliance Industries Limited **(Active)**
- Airtel M Commerce Services Limited **(Active)**
- Shri Dilip Shantilal Shanghvi
- Cholamandalam Distribution Services Limited
- Paytm Payment Bank **(Active)**
- Department of Posts **(Active)**
- Tech Mahindra Limited
- Fino PayTech Limited **(Active)**
- Vodafone m-pesa Limited
- National Securities Depository Limited . **(Killawala Alpana, 2015)**

LITERATURE REVIEW CONCEPT

The past traditional services which were offered by the banks and financial institutions were not able to meet the requirements hence disparity in banking coverage and still lot of rural and semi urban location were not covered. The customers also prefer the seamless and ease of convenience in using products and services, while useful information about various products and services can be communicated through digital mode. Assessing the merit of enormous digital interventions traditional banks have also tweaked their business model and started engagement with customer through multiple modes and not restricting themselves in operating through brick and mortar branches only **(They Thu Nguyen, 2020)**.

The universal reach and adoption of affordable internet and mobile has helped support the

banking transformation and digital banking coverage. Digital banking basically helps with utilization of banking based technology to help facilitate banking transactions in a seamless, efficient and convenient way (**Varda Sardana & Shubham Singhania, 2020**).

In banking parlance digital banking has been synonymously used for services such as electronic banking, internet banking, mobile banking and online banking. Along with that, extensive adoption of digital banking transactions has helped transform the entire banking services towards highly efficient and competitive business environment (**Alex Fahrur Riza, 2019**).

The enormous adoption of digital and electronic banking across the world has helped transform the overall banking industry in achieving the goal of financial inclusion by way of affordable products and services at reduced cost which was a challenge through traditional banking and also helping with increased business accessibility (**Hyun-Soo Choi, 2020**).

Huge share of semi urban as well as rural population is devoid of banking services. With the advent of Payment bank more and more people, primarily the marginalized ones residing in rural geography will be able to have accessibility towards basic financial services, which will help with increased savings and better credit facility. Formalization of savings and credit in turn will help with reduction in inequality and also help masses go up the income level and help achieve overall economic growth. We have greater requirement for remittances as well as savings or investment services for large masses and with mobile and internet banking, banking coverage has seen enormous growth. Affordable data and mobile penetration at all challenging locations has pushed traditional banks to start investing into innovative technology by coming up with customized banking apps. Pre-paid instruments like wallet and pushing for greater adoption by coming with focused and targeted digital campaign (**Vyas G., Gaur L., Singh G**)

There is a greater correlation between customer satisfaction and intent to experiment on final usage. The credibility of institutions, service delivery capability and security are the major parameters that majorly influence end user service satisfaction along with intent to use Payments banks. In order to help Payment banks increase adoption usage, effort should be on to help increase on the customer satisfaction. Payments bank have recently started their operations hence business credibility of them as well as security aspect related to transactions will be the most important influencers to push greater adoption. The technological aspect should also be looked into as safety, security along with uptime are most critical aspects for credibility and higher adoption. Along with that, there should also be mechanism to address real time dispute mechanism for higher usage. (**Kaur J., Sian A.S., Kaur S., Sharma R.R.**)

Payments banks have come into Indian banking space in 2015 when Government of India as well as Reserve Bank of India finally gave banking license to 11 entities to set up challenger banks majorly to help the cause of ground level financial inclusion by coming up with customized savings bank accounts and help process small ticket payments as well as remittances to the rural marginalized unbanked population. Post around 2-3 years of business operations by around 2020, six of originally licensed Payments banks are in active operations and still in process to explore profitability as well as sustainable business model to help scale business operations for growth. They will have to start focusing on creating usage awareness

as well as help to fight safety and security and inherent banking needs of the segments identified **(PR Amani R., Iyer S.V.)**

Reserve Bank of India which is the central bank of India have been stressing for long to aim for universal banking coverage by encouraging the rural financial inclusion in India which is central to their operational objective. Reserve Bank of India have been coming up with various progressive schemes at regular intervals and periodicity for achieving the goal of universal financial inclusion and help reduce unbanked population. To serve the cause of financial inclusion in India, Reserve Bank of India gave in principal approval to 11 Payments bank in the year 2015 and asked them to start operations soon. They are expected to have asset light model as well as innovative technology platforms to reach large unbanked excluded banking segments. Government of India has been promoting digital banking and with demonetisation we have observed rapid increase in digital transactions volume. Payments bank should be able to create more awareness campaign and help with whole range of banking services and products and not restrict it to only limited audience and should be able to reach large excluded banking population **(Kuriakose M., Johnson J)**. The importance of technology led digital banking transactions and universal financial inclusion to help with poverty reduction and sustainable economic progress has caught fancy of esteemed policy makers, informed academics and financial services experts. There are multiple benefits associated with digital banking and online financial transactions to end user, technology remittance service providers, policy experts and the overall economy by helping with universal banking coverage, formalization of economy, addressing unbanked population requirements, reduction in transaction cost and greater efficiency **(GPII, 2010)**. From practical point of view, online banking or digital banking are basically financial transactions which are being processed through mobile technology - mobile banking, personal computer - internet banking, or pre-paid instrument or plastic cards linked to core digital banking system. These primarily includes regular services like cash in deposits, cash out withdrawals and fund transfers **(Peterson K. Ozili, 2018)**.

RESEARCH METHODOLOGY

Pilot Study Conductance

For the primary research on the study of payments banks in India from user and employee perspective, a pre-pilot and a pilot study was conducted to gauge the effectiveness of the study tools before the final rollout.

Pre-pilot and the pilot study was conducted through the use of google forms. This was the ideal way to reach out to a larger audience to test the tools designed and check their reliability and validity.

The study tools designed, would undergo the following process:

1. **Design phase:** The tools were designed in a way that they were mapped to the key research areas and contribute to the overall study in an organized fashion
2. **Third eye check:** The study tool underwent a few third eye checks to correct for inadvertent errors if any.
3. **Pre-pilot:** Pre-pilot study was conducted wherein the google form of the quantitative study tool was circulated to a select few (~20 people) for further checks and balances (if any). For the qualitative study tool, the same was conducted with the help of one or two key informant interviews.
4. **Pilot study:** Based on the observations of the pre-pilot, the tools underwent minor changes to make the tools more effective.
5. **Analysis of pre-pilot and pilot data:** Data of the pre-pilot and the pilot was thoroughly analyzed to check whether they are contributing to the study in the way they were envisaged.

The below section details out the checks and balances that formed part of the pre-pilot and the pilot study

Checks and Balances of the Pre-Pilot and the Pilot Study

The tools designed underwent the following checks and balances:

1. **Google form and the responses received:** Pre-pilot helped check on the effectiveness of the quantitative tool's google form circulated.
2. **Outcome measures:** The feasibility of the outcome measures was checked. This was done through the help of the key research areas matrix mapped to the research questions and whether the responses received in majority are in line with the matrix or not.
3. **Respondent fatigue:** Respondent fatigue was also measured and counted of all the total responses with respect to the incomplete data forms received.

Identifying changes to the study tool: In case of changes to the study tool, the pre-pilot helped identify through the analysis of the responses received and whether they are in line with the study objectives.

TOOL AND DATA VALIDATION

Tool validation: Study tools devised for the study was tested via the pre-pilot in the first phase and through the pilot in the second phase. For the objectivity of the questions, the answers received was checked through respondent feedback in the pre-pilot as the tools was circulated with the defined set of 20 people.

Validity Component	Technique deployed /to be deployed
Face Validity	Extensive assessments of the topic and past works analysis / Post hoc theory
Content validity	Literature Review
Criterion Validity	Regression Analysis
Construct Validity	Q- Sorting

Data cleaning: Dataset was received through Google forms already populated via google spreadsheets. This took place automatically as the user filled the google form. The data set subsequently was cleaned for errors and outliers if any. Outliers in this case was dropped as they would have skewed the results.

Data validation: Dataset received during the pre-pilot and the pilot was cleaned prior to analysis of any kind. Data set after requisite cleaning was analyzed to check for incomplete forms, outliers and their impact on the overall data set. **Simple checks of confidence intervals, correlations was also conducted to understand the validity of the datasets received.**

Assigning of weights to the questions: Based on the cleaned dataset and the objectives of study, questions was assigned weights in order of their contribution based on user responses before checking for reliability.

Reliability Check

Since the nature of the pilot and the pre-pilot is that of a mixed methods research design, the study would entail simple reliability checks, **the most prominent being the use of Cronbach's Alpha.** Cronbach's alpha measures internal consistency. In other words it is a measure of scale reliability. Pilot study analysis done for internal consistency stands at around 0.78 which confirms consistency to go ahead with final study.

Case processing Summary			
		N	%
Cases	Valid	202	100
	Excluded	0	0
	Total	202	100
a. Listwise deletion based on all variables in the procedure			
Reliability Statistics			
Cronbach's alpha			
0.782			

The use of other advanced mechanisms such as principal component analysis would not be feasible as the tool has been kept to a minimum to reduce respondent fatigue and with less number of variables, principal component analysis would be futile.

Key Research Areas Matrix

S.No	Study Tool	Key research area	Likely design of the question	Respondent
1	Quantitative	User identifiers (Name, age etc.)	N/A	End user
2	Quantitative	Types of services used	Multiple choice response	End user
3	Quantitative	User affordability (4-5 questions)	10 point Likert scale	End user
4	Quantitative	User accessibility (4-5 questions)	10 point Likert scale	End user
5	Quantitative	Frequently used services	Multiple choice response	End user
6	Quantitative	Average monthly transaction value	Single response (Range response)	End user
7	Quantitative	User needs	Multiple choice response	End user
8	Quantitative	Enablers and barriers in usability	Multiple choice response	End user
9	Qualitative	Customer acquisition strategy	Long answer question	Employee of payments banks
10	Qualitative	Digital strategy	Long answer question	Employee of payments banks
11	Qualitative	Diversification strategy	Long answer question	Employee of payments banks
12	Qualitative	Enablers and barriers in customer acquisition	Long answer question	Service partners of payments banks
13	Qualitative	Enablers and barriers in customer usage	Long answer question	Service partners of payments banks

RESEARCH GAP

As part of research proposal and deeper analysis, we need to be able to have complete clarity on given topic and in sufficient information to be worked upon to help answer identified issues. These are basically research requirements and have to be prioritized by the help of multiple parties involved. Gaps can be divided into Geographical based ones, Evidence based gaps, Time gaps and Population gaps.

Sl. No.	Research Gaps	Detail
1	Geographical Gap	Payments Bank and Challenger Institutions scope and research work has been a new concept with respect to Indian financial space .Much of research has not been done here hence need to research on the said subject.
2	Evidence Gap	Banking services adoption as well as digital and financial inclusion gaps are prevalent when comparison being made across urban, semi urban and rural areas hence evidence based research is required.
3	Population Gap	Past studies were being done on limited number of respondents hence lack of generalisation. To help generalised the findings studies on comparable large population is required.
4	Time Gap	There are limited research done on Payments bank and very few past work done hence time gap .Latest study on Digital and diversification strategy deployed by Payments bank in India is being required to ascertain the viability of the said model.

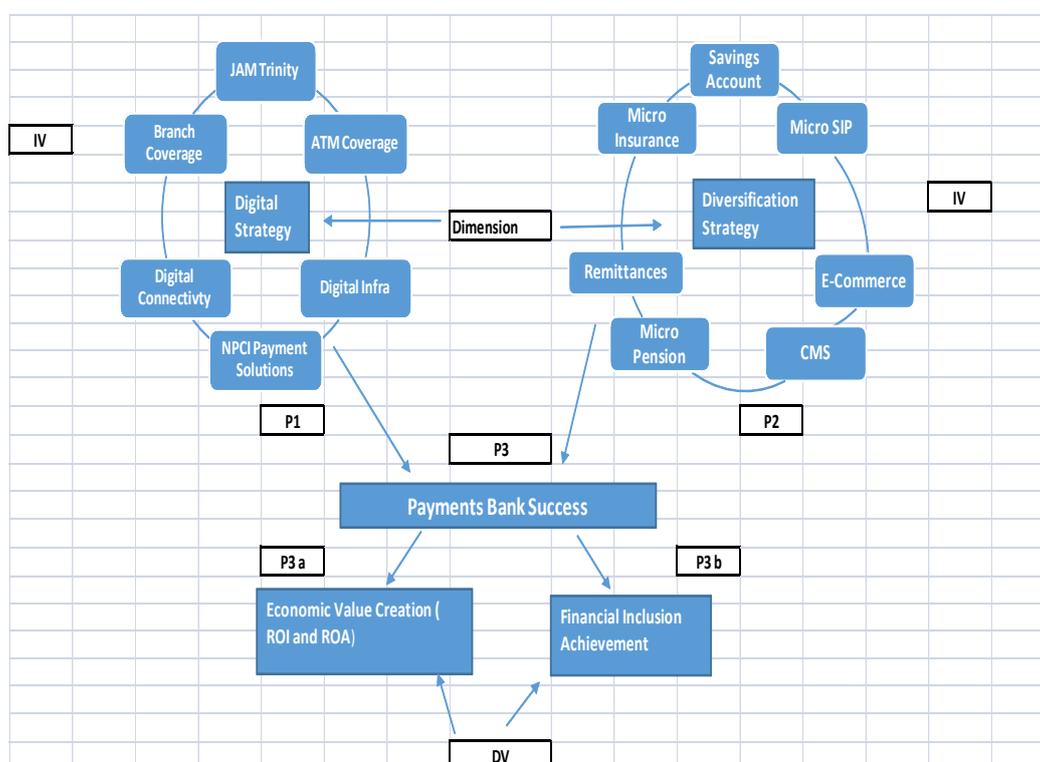
On the basis of Review and analysis, research gaps has been identified and a table of showing objective association with the gaps has been mentioned below.

Sl. No.	Objectives	Research Gaps
1	What are the various gaps present in the mentioned area of research?	Geographical Gap Evidence Based Gap Population based Gap Time Gap
2	Which country and the topic are most important for the research undertaken?	India and Digital banking leads the most important research topic.

RESULTS - PROPOSED CONCEPTUAL MODEL FOR THE STUDY BASIS GAPS IDENTIFICATION

Past Researches on Digital Banking mainly focused on describing the factors for technology adoption however, there is very limited study on comprehensive study on Digital First strategy involving Payments Bank from an Indian perspective.

Payments Bank appears to have several advantages over incumbents, including importantly, their adaptability to different client needs. Unencumbered by legacy infrastructures and focused on only a few core services and innovative structure, new digital banking initiatives can offer a more tailored, faster, and more cost-effective service.



CONCLUSION

1. The elaborate count of research study and increased publication year on year in case of digital banking, diversification strategy, Payments bank and finally financial inclusion confirms about relevance of the topic as well as importance attached to overall financial ecosystem. There are around 15 important areas and pace of work gathered steam in last 4-5 years where almost 85 to 90 percent of articles were published.
2. As far as research approach is concerned, majority have favoured the mixed analysis research approach followed by qualitative and finally quantitative research method.
3. There has been general preference for the mixed data approach and also been adopted by multiple research scholars as compared to other research design.
4. The maximum number of research articles related to Payments bank, digital banking initiatives, diversification strategy pertaining to business expansion and advances on financial inclusion have been published by Indian research scholars as there has been digitization push by Government of India post demonetization exercise and Payments bank operations as challenger institutions to serve large unbanked population.
5. The detailed analysis of the broad range of articles confirms that that the body of research with respect to Payments Bank is still evolving as it's a new experiment done by RBI to support the cause of banking coverage. Building the prudent business model for Payments banks in India offers unique insights into the key strategic digital and operational decisions to become and remain profitable. For instance, during the course of operations several lessons have emerged for Payments banks as well as to the policymakers and regulators which points that scale up of distribution and digital transactions is of paramount importance and profitability of a Payments bank is dependent on achieving higher number of accounts and driving digital transactions. Digital Initiatives undertaken to reach out to masses and behaviour of targeted segments to be studied is different from other traditional financial assets, so its sophisticated study using a large variety of tools is highly required. The study of digital initiatives and emergence of Payment Banks/ Small Finance Banks/ BC outlets as alternative to traditional banking approach will help all the stakeholders, including Financial Institutions, Policy makers, regulators & even conduct their activities in the best possible way. Making sense of further Differentiated Banks with respect to banking achievement will help reach the goal earlier. Payments banks must invest heavily in the initial rollout of a large scale agent network to support account opening and servicing. Simultaneously, digital ecosystem transactions must scale up and multiple range of digital use cases must expand like merchant payments and salary disbursements along with Cash Management System to improve the client value proposition and overall reduction in cost with cash-in and cash-out.

References

1. Ab. Aziz, Muhammad Ridhwan, "A Review On Literatures Of Islamic Financial Institutions And Market Between 2010 – 2020" (2021). Library Philosophy and Practice (ejournal). 5029. <https://digitalcommons.unl.edu/libphilprac/5029>
2. Ab. Aziz, Muhammad Ridhwan; Nooh, Mohammad Noorizzuddin; Khairi, Khairil Faizal; Johari, Fuadah; Iskandar Mirza, Azrul Azlan; And Nordin, Nurul Izzati, "A Review On Literatures In Planning And Managing Of Islamic Wealth Distribution (2001-2013)" (2014). Library Philosophy and Practice (e-journal). 1144
3. AbdelKarim, M. S. (2019). Electronic Banking Strategies and Their Impact on Customers' Satisfaction: Empirical Evidence from Palestine. *Asian Social Science*, 15(10), 20-35.
4. Abdulrazaq Taiye JIMOH, A. T. (2019). Impact Of Financial Inclusion On Performance Of Banks In Nigeria. *Fountain University Osogbo Journal of Management*, 4(3), 84-96.
5. Ahmad Hassan Ahmad*, C. G. (2020). Mobile Money, Financial Inclusion And Development: A Review With Reference To African Experience. *Economics SURVEY*, 753-792.
6. Ahmed HASSAN, R. A.-A. (2020). The Exclusion of People with Visual Disabilities from Digital Banking Services in The Digitalization Era. *Journal of Electronic Banking Systems*, 1-15.
7. Aijaz Ahmed Shaikh. (2016). Examining Consumers' Intention,. *Business And Economics*.
8. ajay d bisanalli, m. s. (2020). financial inclusion in india. *jac : a Journal Of Composition Theory*, xiii(1), 69-75.
9. Alan @ ali madjelisi megargel, s. V. (2020). Digital banking acceler digital banking accelerator: a ser or: a service-oriented ar vice-oriented architectur chitecture starter kit for banks . Institutional knowledge at singapore management university.
10. Alex fahrur riza. (2019). Customer acceptance of digital banking in islamic bank:study on millennial generation. *Conference of islamic management accounting & economic*.
11. Aliakbar arsanjani*, n. D. (2019). Challenges of the iranian e-banking business model in digital transformation . *Journal of money and economy* , 389-419.
12. Andra sonea, w. G. (2019). An exploratory spatial analysis of access to physical and digital retail banking channels1. *Technical report*, 1-44.
13. Angela c. Lyons, j. K.-h. (2020). Impacts of financial and digital inclusion on poverty in south asia and sub-saharan africa*. 1-39.
14. Anusha n., r. N. (2020). Insurance inclusion: a tool for financial inclusion in india. *Seshadripuram journal of social sciences (sjss)*, 2(2), 196-206.
15. Atika ahmad kemal. (2016). Mobile banking for financial inclusion in pakistan. *Thesis paper*.
16. Ayu sari wulandari, m. D. (2020). Enhancing financial inclusion through social capital in indonesia: a case study of women micro enterprise group in bogor regency, west java. *International journal of society, development and environment in the developing world*, 31-44.25
17. Bazira bigawaabel. (2020). Financial inclusion in burundi: the use of microfinance services in semi-urban areas. *Journal of economic development*, 45(3), 101-116.
18. Carmen Cuesta, M. R. (2015). The digital transformation of the banking industry. *digital economy*, 1-10.
19. Cyn-Young Park and Rogelio V. Mercado, J. (2015). Financial Inclusion, Poverty, and Income Inequality in Developing Asia . *ADB Economics Working Paper Series* , 1-19.

20. Dai-Won Kim, J.-S. Y. (2017). Financial Inclusion and Economic Growth in OIC. *Research in International Business*, 1-34.
21. Damayanti, M. T. (2019). Accelerating Financial Inclusion Through Digital Banking . *Proceeding Book of The 4th ICMEM 2019 and The 11th IICIES 2019, 7-9 August 2019, Bali, Indonesia* , 835-839.
22. Darryl Proctor. (2019, December 19). temenos. Retrieved from What is Digital Banking?: <https://www.temenos.com/news/2019/12/19/what-is-digital-banking/>
23. Dhmaid, s. A. (2020). Electronic banking-marketing and its impact on enhancing attract customers a case study of the rafidain bank in dhi qar governorate. *Palarch's journal of archaeology of egypt/egyptology*, 3612-3628.
24. Dijana medenica mitrović, m. R. (2020). Concept of online customers experience in digital. *Innovative business and management*, 79-84.
25. Dr. Mrinali kankar, *. V. (2015). Digital banking in india. *Aijra*, 4(4). Emily. (2017). Effects of digital banking strategy on financial inclusion among commercial banks in kenya. *Reseachgate*, 1-64.
26. Erni prasetiyani, r. V. (2020). Construction of financial inclusion behaviour models in the implementation of fintech at fishermen smes carita, purwakarta. *Journal of management and leadership*, 3(1), 43-55.
27. Fathima, J. (2020). Digital Revolution in the Indian Banking Sector. *International Journal of Commerce*, 8(1), 56-64.
28. Frida N. Wathome. (2020). Effects Of Digital Credit On Financial Inclusion Of The Youth In Kenya: A Survey Of Kangemi, Nairobi County. *Project Report*, 1-64.
29. GDS Modellica. (2020, September 14). 10 Key Benefits of Digital Banking for Users. Retrieved march 16, 2021, from .gdsmodellica: <https://www.gdsmodellica.com/10-key-benefitsof-digital-banking-for-users/>
30. George Okello Candiya Bongomin, P. Y. (2019). Digital financial innovations in the twentyfirst century Do transaction tax exemptions promote mobile money services for financial inclusion in developing countries? *Digital financial innovations*, 189-208.
31. Gerhard Kling, V. P.-C. (2020). A theory of financial inclusion and income inequality. *The European Journal of Finance*, 1-22.
32. GPMI. (2010). G20 Principles for innovative financial inclusion - executive. Retrieved 2020, from GPMI: <https://www.gpmi.org/publications/g20-principles-innovative-financialinclusion-executive-brief>
33. How to develop a profitable, customer-focused digital banking strategy: Open banking services and developer-friendly APIs. (2015). *Journal of Digital Banking*, 6-12.
34. Howard Chitimira, M. N. (2020). Legislative and Other Selected Challenges Affecting Financial Inclusion for the Poor and Low Income Earners in South Africa. *Journal of African Law*, 1-19.
35. Howard Thomas, Y. H.-W. (2019). *What Is "Financial Inclusion"?* Singapore: Singapore Management University.
36. Hyun-Soo Choi, R. K. (2020, May). Physical Frictions and Digital Banking Adoption. 1-50.
37. Iryna Didenko, J. L.-D. (2020). Social safety and behavioral aspects of populations financial inclusion: A multicountry analysis. *Journal of International Studies*, 13(2), 347-359.
38. Isaac Koomson, R. A. (2019). Intensifying financial inclusion through the provision of financial literacy training: a gendered perspective. *Network For Socioeconomic Research And Advancement*.
39. Ivo Jenik and Kate Lauer. (2017). *Regulatory Sandboxes*.
40. Johari, Fuadah; Ab. Aziz, Muhammad Ridhwan; and Mohd Ali, Ahmad Fahme, "A Review

41. On Literatures Of Zakat Between 2003-2013" (2014). *Library Philosophy and Practice* (e-journal). 1175.
42. John Vong, P. M. (2016). Digital Banking for Alleviating Rural Poverty. *Managing the Asian Century*, 3-18.
43. Julian Schmidt, P. D. (2017). Digitalization of the Banking Industry: A Multiple Stakeholder Analysis . *Twenty-third Americas Conference on Information Systems*, 1-11.
44. Jyoti Suraj Harchekar. (2018). Digitalization in Banking Sector. *International Conference On Digital Economy And* , 103-109.
45. Källoff, H. (2020). Banking the unbanked: Financial inclusion and economic sustainable development for women? *Linköping university - Department of Culture and Society (IKOS)* .
46. Kamutuezu, E. U. (2016). *The Adoption of Digital Banking in Namibia. Thesis Paper.*
47. Kern Alexander And Xenia Karametaxas. (2020). *Digital Transformation And Financial Inclusion.* 1-18.
48. Khattab Ibrahim Hadid, N. K. (2020). The Effect of Digital Banking Service Quality on Customer Satisfaction: A Case. *Asian Journal of Applied Science and Technology*, 4(1), 06-29.
49. Kisotu David Melubo, S. M. (2020). Digital Banking And Financial Inclusion Of Women. *International Journal Of Current Aspects In Finance, Banking And Accounting*, 2(1), 28-41.
50. Kotova O.V. Frolova A.S. Novikova N.Yu. (2019). Development of digital banking services in Russia Today. *1st International Scientific and Practical Conference on Digital Economy*, 105, 1-5.
51. Lasmé Mathieu N'dri. (2020). Financial inclusion, mobile money, and individual welfare: The case of Burkina Faso . *Telecommunications Policy* , 1-16.
52. Loh, H.-S. C. (2020, May). *Physical Frictions and Digital Banking Adoption.* 1-50.
53. LUDVIG WEDBERG. (2019). How can traditional Swedish retail banks address the needs and behavior of Generation Y in digital banking? *Project In Computer Science And Engineering*, 1-15.
54. Luis Borges Gouveia, M. P. (2020). Digital Transformation and Customers Services: the Banking Revolution. *International Journal of Open Information Technologies*, 8(7), 124-128.
55. M. K.-S.-W. (2018). Financial inclusion and economic growth in OIC countries. *Research in International Business and Finance*, 1-14.
56. Madhu Sharan and Priyanka Dale. (2019). Promoting Gender Equality and Inclusive Growth Through Financial Inclusion. *International Multidisciplinary Research Journal*, 1(1), 25-31.
57. Md Abdullah Omar and Kazuo Inaba. (2020). Does financial inclusion reduce poverty and income inequality in developing countries? A panel data analysis. *Economic structure*, 1-25.
58. Md. Morshadul Hasan, L. Y. (2020). Promoting China's Inclusive Finance Through Digital Financial Services. *Global Business Review*, 1-23.
59. 'Mantai Mamello Florence Jonathan. (2020). Does the development of mobile financial services have an Eco-cash. A research study.
60. Moshele Itumeleng Koenaitse. (2016). The impact of Digital Banking & Digital Customer Service on the usage and adoption of banking products and services in South Africa, using the Technology Acceptance Model. *The School of Economic & Business Sciences*, 1-62.
61. Natalya Bykanova, D. G. (2020). Digital Transformation of the Russian Banking Sector in Terms of Pandemic. *Proceedings of the 8th International Conference on Contemporary Problems in the Development of Economic*, 157, 1-6.
62. Nera Marinda Machdar. (2020). Financial Inclusion, Financial Stability and Sustainability in the Banking

- Sector: The Case of Indonesia. *International Journal of Economics and Business Administration*, VIII(1), 193-202.
63. Nihinlola, R. M. (2020). Evaluating the relationship between financial inclusion, social inclusion and multidimensional poverty reduction . *Social and Behavioral Sciences*.
 64. North, R. (2018, November 6). The Role Of Digital Banking In India –Importance Of Digital Banking In India. Retrieved from *Entreprise Edges*: <https://www.enterpriseedges.com/role-of-digital-banking-india>
 65. Olayinka O. Adegbite, C. L. (2020). Bridging the financial inclusion gender gap in smallholder agriculture in Nigeria: An untapped potential for sustainable development. *World Development*, 1-10.
 66. Oni, O. O. (2019). Effect Of Digital Banking On Customer Satisfaction Within The Federal Capital Territory, Nigeria . *Accountability, Transparency And Nation-Building*, 1412-1418.
 67. Ouechtati, I. (2020). The Contribution Of Financial Inclusion In Reducing Poverty And Income Inequality In Developing Countries. *Asian Economic And Financial Review*, 10(9), 1051-1061.
 68. Ozili, P. K. (2020). Financial inclusion: a strong critique. *MPRA Paper*, 1-17.
 69. Päijät-Hämeen Osuuspankki. (2019). The Accessibility Of Digital Banking Services To 18-26-Year-Olds. *Thesis Paper*, 1-58.
 70. Parul Mahajan, . A. (2017). Effect Of Demonetization On Financial Inclusion In India. *International Of Science Technology And Management*, 6(1), 338-343.
 71. Peterson K. Ozili. (2018). Impact Of Digital Finance On Financial Inclusion And Stability. *Science Direct* , 329-340.
 72. Prakash K. Shrestha. (2020). Financial Inclusion in Nepal: Progress and Constraints. *Journal of Development Innovations*, 4, 1-23.
 73. Prashant Bharadwaj and Tavneet Suri. (2020). Digital Financial Services In Africa Improving Financial Inclusion Through Digital Savings And Credit. *Aea Papers And Proceedings 2020*, 584–588.
 74. Priyanka Menon. (2018). Financial Inclusion, Banking The Unbanked: Concepts, Issues, And Policies For India. *Practitioner Paper*, 1-5.
 75. Rasyida, A. J. (2020). The Role Of Digital Financial Innovation In Supporting Financial Inclusion In Indonesia. *Case Study Of Financial Services Authority*, 1-36.
 76. Ratna Sahay, M. Č. (2015). Financial Inclusion: Can It Meet Multiple Macroeconomic Goals? . *Views Of The Imf*, 4-34.
 77. Richard, M. A. (2014). Digital Banking: Investigating The Use Of Social Media And Mobile Applications In Building Relationships, Loyalty And Reducing Churn. *Academy Of Marketing Conference 2014*, 1-26.
 78. Rinaldi, N. K. (2020). Trust Role In Acceptance Of Digital Banking In Indonesia. *International Journal Of Trade, Economics And Finance*, 11(1), 1-18.
 79. Roberto Mavilia & Roberta Pisani. (2019). Blockchain And Catching-Up In Developing Countries: The Case Of Financial Inclusion In Africa. *African Journal Of Science, Technology, Innovation And Development*, 1-13.
 80. Rodin B.K, O. S. (2019). Fintech In Digitalization Of Banking Services. *1st International Scientific And Practical Conference On Digital Economy*, 105, 1-4.
 81. Ruppa, S. (2020). The Socioeconomic Effects Of Financial Inclusion In Indonesia. *Thesis Paper*, 1-40.
 82. S. Ananda, S. D. (2020). What Factors Drive The Adoption Of Digital banking? An empirical study . *Journal of Financial Services Marketing*.

83. S. Chandrasekaran. (2020). Transforming And Empowerment Of Digital Banking In India. *Journal Of Analysis And Computation*.
84. Sabine Reydet, L. C. (2017). The Effect Of Digital Design In Banking On Customers' Commitment And. *Journal Of Retailing And Consumer Services*, 132-138.
85. Sami Ben Naceur, A. B. (2017). Can Islamic Banking Increase Financial Inclusion? 213-253.
86. Sanjaya Kumar Lenka, R. S. (2017). Does Financial Inclusion Spur Economic Growth In India? *The Journal of Developing Areas*, 51(3), 215-230.
87. Sarwat Jahan, J. D. (2019). *Imf Working Papers* , 1-32.
88. Sharma, A. (2017). Digital Banking In India: A Review Of Trends, Opportunities And Challenges. *Ijrmst*, 168-180.
89. Sonja Grabner-Kra"uter, R. F. (2015). Consumer Acceptance Of Internet Banking: The Influence Of Internet Trust. *International Journal Of Bank Marketing*, 485-504.
90. Sonu Garg, P. A. (2014). Financial Inclusion In India – A Review Of Initiatives And Achievements. *Iosr Journal Of Business And Management (Iosr-Jbm)*, 16(6), 52-61.
91. Stephen Mago, S. C. (2014). The Impact Of Mobile Banking On Financial Inclusion In Zimbabwe: A Case For Masvingo Province. *Mediterranean Journal Of Social Sciences*, 5, 221-231.
92. Sudha.K.M, G. (2018). The Concept Of Financial Inclusion In Digitalised India. *Emperor International Journal Of Finance And Management Research*, 14-20.
93. Sunitha Devi1, P. R. (2020). E-Link Service Synergity, Perceived Risk Management, And Tri Hita Karana In Lpd In Driving Financial Inclusion. *Proceedings Of The 5th International Conference On Tourism, Economics, Accounting*, 158, 1-8.
94. Svitlana Naumenkova, S. M. (2019). Digital Financial Inclusion: Evidence From Ukraine. 194-205.
95. T.Sasikumar. (2020). An Empirical Study On Technology And Banking Services In India. *Palarch's Journal Of Archaeology Of Egypt/Egyptology*, 12578-12586.
96. Tangkalayanan, A. T. (2015). Factors Influencing Customers' Adoption Of Digital. *Engineering Transactions*, 168-173.
97. Tejil Thomas, S. T. (2020). Digital Financial Inclusion: A Catalyst For Socio-Economic Transformation Of Scheduled Castes And Scheduled Tribes In Kerala. *Iosr Journal Of Business And Management*, 18-26.
98. Tekeste Berhanu Lakew And Hossein Azadi, *. (2020). Financial Inclusion In Ethiopia: Is It On The Right Track? *Ijfs*, 1-13.
99. Thai-Ha Le, F. T.-H.-C. (2020). Does Financial Inclusion Impact Co2 Emissions? Evidence From Asia. *Finance Research Letters*, 1-7.
100. Thorsten Beck. (2016). Financial Inclusion –Measuring Progress And Progress In Measuring.
101. Thuy Thu Nguyen, H. T. (2020). Vietnam, Determinants Of Digital Banking Services In. *Asian Economic And Financial Review*, 680-697.
102. Tino Mäkelä. (2019). Older Finnish Consumers' Experiences Of Digital . *Thesis Paper*, 1-40.
103. Ulf Thoene, Á. T.-H. (2017). Financial Inclusion In Colombia: A Scoping Literature Review. *Intangible Capital*, 582-614.
104. Varda Sardana & Shubham Singhania. (2020). Digital Technology In The Realm Of Banking: A Review Of Literature. *International Journal Of Research In Finance And Management*, 28-32.

105. Varghese, M. J. (2014). Role Of Financial Inclusion In The Development Of Indian Economy. *Journal Of Economics And Sustainable Development*, 5, 6-13.
106. Vijay Kumar, V. (2020). Financial Inclusion And Bank Profitability: Evidence From A Developed Market . *Global Finance Journal* , 1-12.
107. Viviane Azevedo, L. F. (2019). Credit Cards Issued By Non-Financial Companies: An Alternative Credit Cards Issued By Non-Financial Companies: An Alternative. 1-40.
108. Wassan Abdullah Alkhowaiter. (2020). Digital Payment And Banking Adoption Research In Gulf Countries: A. *International Journal Of Information Management*, 1-17.
109. Winny Puspasari Thamrin, K. D. (2020). The Intention Of Using Cell Phones In Digital Banking Service Base On External Factors And Internal Factors. *International Journal Of Research In Counseling And Education*, 1, 55-63.
110. World Bank. (2012). *Banking The Poor: Measuring Banking Access In 54 Economies: Usa*.
111. World Bank. (2014). *Global Financial Development Report 2014*. Retrieved From [Http://Ww1.World-Bank.Org/](http://Ww1.World-Bank.Org/)
112. Yadav, V. A. (2020). *District Level Assessment Of Financial Inclusion In India*. Mpra Paper, 2-19.
113. Yn-Young Park, A. R. (2018). Financial Inclusion, Poverty, And Income Inequality. *The Singapore Economic Review*, (2018), 1-22.
114. Yoonseock Son, H. E. (2016). Impact Of Customers' Digital Banking Adoption On Hidden. *Journal Of Operations Management*, 1-47.
115. Youn Kyoung Kim, Y. L. (2019). *Journal Of Immigrant & Refugee Studies*, 1-20.
116. Zahid F. Mamedov, A. A. (2020). *The Development Of Digital Banking In Modern Russia*. 55th International Scientific Conference On Economic And Social Development