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DIGITAL TRANSFORMATION THROUGH DIGITAL INNOVATION ON BANKING SECTOR- AN OVERVIEW

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ABSTRACT
The research study on digital transformation through digital innovation on banking sectors an overview is refers the rapid development of digital transformation technology has brought the global community into the digital era. Advanced digital technologies (e.g., the Internet of Things, big data analytics, machine learning, artificial intelligence, and cloud computing) have changed social and industrial activities. Digital transformation within the banking industry extends beyond mere payment transactions and peer-to-peer fund transfers. The Mobile banking empowers customers with the capability to manage their bank accounts and online financial activities seamlessly via smart-phone applications. Artificial intelligence (AI) has significantly altered the functioning of the banking and financial sectors, introducing innovations like chatbots, online assistants, data analysis, and predictive capabilities. Machine learning (ML) also collaborates with data to enhance fraud detection. In real-time, it gathers, retains, and cross-references customer data to pinpoint unusual deviations, offering timely suggestions for preventive actions. Research methodology is an academic activity and as such the term should be used in a technical sense on digital banking sectors. A Random sampling techniques is used for data collection. Both primary and secondary data collection with a questionnaire is framed on sampling size of 60 banking customers on digital transformation in banking with a SPSS software. The digital transformation services, provide expert guidance, ensuring a smooth transition to modernized, scalable infrastructure that aligns with business goals and leverage the latest technologies to drive innovation, improve customer experiences, and achieve long-term success.

KEYWORDS: *Digital transformation, innovation, trends factors, power, banking sectors*

INTRODUCTION

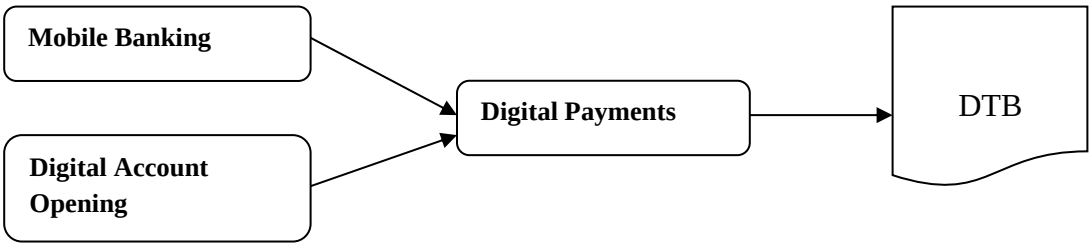
Digital financial inclusion involves the deployment of the cost-saving digital means to reach currently financially excluded and underserved populations with a range of formal financial services suited to their needs that are responsibly delivered at a cost affordable to customers and sustainable for providers. Heart of digital banking is to remote identification made as easy as taking a selfie, apply for a bank product in the blink of an eye, get a response from the bank in real time, to know how the financial system views my business and how to make the most out of financial management solutions, and the power of data to predict future financial events, to providing timely and personal financial offers etc. The rapid development of digital transformation technology has brought the global community into the digital era. Advanced digital technologies (e.g., the Internet of Things, big data analytics, machine learning, artificial intelligence, and cloud computing) have changed social and industrial activities. Currently, digital transformation is becoming an inevitable reality. Digital transformation has become an important issue in the banking sector as it can enlarge customer outreach by servicing without physical branches, marketing differentiation from competitors, and for operational cost efficiency.

Digital Transformation in Banking system

1. Mobile Banking: Digital transformation within the banking industry extends beyond mere payment transactions and peer-to-peer fund transfers. Mobile banking empowers customers with the capability to manage their bank accounts and online financial activities seamlessly via smart-phone applications. This comprehensive access encompasses reviewing account details, monitoring daily transactions, managing investments, accessing customer support services, and staying updated with financial news.
2. Digital Account Opening: Banks have streamlined the account opening process by implementing automation, which shortens the time required to initiate a new bank account and diminishes the manual tasks that employees have to undertake. Consequently, employees can allocate more of their time to delivering additional value to clients, making it a prime illustration of how digital engagement is enhanced throughout the customer journey while reducing the necessity for in-person branch visits.

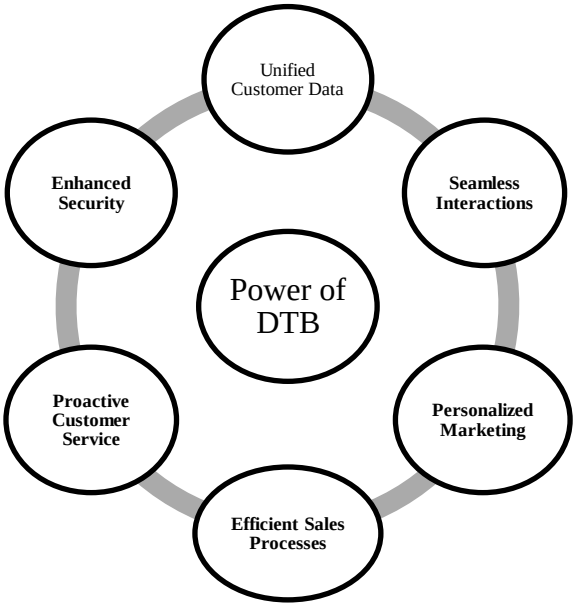
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3. Digital Payments: Financial institutions have integrated digital payment systems into their offerings, encompassing online transactions, mobile payments, and digital wallets. This allows customers the flexibility to conduct transactions and money transfers using their smartphones or computers. Digital payments have effectively consolidated mobility and convenience onto a unified platform, empowering customers with enhanced control and transparency in their financial digital transformation activities.



Power of a Digitized Customer Journey

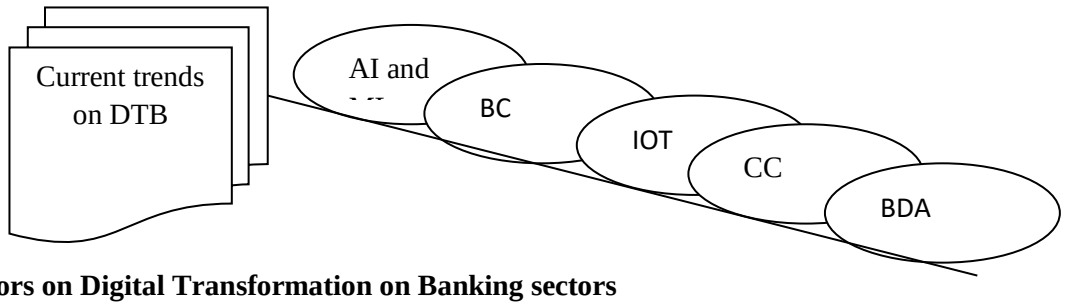
1. Unified Customer Data: The Digital transformation allows for the consolidation of customer data across all touchpoints. This unified view empowers bank representatives to understand customer needs deeply and offer personalized solutions at every stage of their journey.
2. Seamless Interactions: Through AI-driven chatbots and intelligent automation, customers receive prompt responses to their inquiries 24/7, anywhere. This not only enhances convenience but also builds trust and satisfaction.
3. Personalized Marketing: Financial institutions can leverage advanced data analysis to personalize their services and product offerings, tailoring them to customers' requirements and preferences. Personalized recommendations and offers make customers feel valued and understood.
4. Efficient Sales Processes: Digital tools streamline the sales pipeline, reducing customer friction. Automated workflows and CRM systems ensure no lead falls through the cracks, transforming prospects into loyal customers more efficiently.
5. Proactive Customer Service: Predictive analytics and real-time monitoring enable proactive customer support. Instead of waiting for issues to arise, banks can predict customer needs and address issues proactively before they affect the customer.
6. Enhanced Security: Advanced digital solutions provide robust security measures, safeguarding customer data and transactions. Features like biometric authentication and real-time fraud detection offer reassurance and build customer trust.



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Current Trends on Digital Transformation in Banking

1. **Artificial Intelligence and Machine Learning:** Artificial intelligence (AI) has significantly altered the functioning of the banking and financial sectors, introducing innovations like chatbots, online assistants, data analysis, and predictive capabilities. Machine learning (ML) also collaborates with data to enhance fraud detection. In real-time, it gathers, retains, and cross-references customer data to pinpoint unusual deviations, offering timely suggestions for preventive actions.
2. **Block chain:** Any discourse concerning digital transformation in the financial services sphere is inadequate without addressing the impact of blockchain technology. The adoption of blockchain in banking services has brought about augmented transparency, secure digital customer identity transactions, and an improved user interface.
3. **Internet of Things (IoT):** IOT plays a pivotal role in enabling actions such as biometric sensor-based authorization, asset tracking and monitoring, delivery of location-based services, and contactless payments. It customizes and individualizes customer experiences by harnessing real-time data analysis. Moreover, IoT has ushered in risk management practices and opened doors to diverse platforms through seamless data exchange.
4. **Cloud Computing:** Banks have transitioned from initial resistance to embracing the inevitability of cloud-based services. Cloud computing empowers banks to develop solutions featuring applications and infrastructures that enhance their operational efficiency. Furthermore, cloud-driven services yield heightened productivity and enable the swift delivery of products and services.
5. **Big Data Analytics:** The Banks' operations have evolved significantly over the past decade, and big data is a crucial catalyst for this transformation. From scrutinizing customer spending habits to risk assessment and feedback management, big data technology has elevated the progress within the banking sector to a whole new level.



Factors on Digital Transformation on Banking sectors

1. Customer is Crucial: The fast-changing market, seamless service delivery, high-end user experience, personalized product experience, transparency, and security are the core of customer satisfaction. Digital transformation in the banking industry must be customized to meet customers' needs. Post-covid, most of the customer bases have become reliant on digital technologies, and it is all-important to reinvent your aging, legacy infrastructures before your competition overtakes you.
2. Continuous Improvement: A seamless innovation delivery pipeline built on agile principles is key to continuous improvement. The pipeline should be so effective that it can easily track changing market trends, test innovative products, and facilitate fast feedback mechanisms to iterate products for enhancements. This cycle contributes to on-demand service delivery, continuous innovation, and continuous improvement, accelerating time-to-market.
3. Modernize infrastructure: Achieving digital transformation is not just about introducing digital transformation technologies. These digital transformation trends are difficult to cope with, and the companies that have their hand's complete rope in MSPs, such as Veritis, to execute digital transformation strategies. Micro service architecture, APIs, and Dev Ops can help with continuous integration and delivery, resulting in shorter release cycles.
4. Operating Model: The customers need a hybrid experience, a combination of never-seen digital experience in terms of speed and convenience and the personal look and feel of the product.
5. Identify Viable Solutions: Identify and leverage the potential of all the minimum viable digital transformation solutions and introduce them across the digital transformation services. Digital transformation technologies often sway enterprises and take on too many digital transformation tools.
6. Leverage the Power of Data : Banking institutions should realize the power of data and related tools and resources in driving business success. They must consider implementing data analytics practices to understand and monitor customer thinking patterns.

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7. Improve skill set: The drive for improved skill sets for enterprise digital transformation will require necessary investment in changing operating culture, thinking patterns, the culture of learning, skillset training, and more across the teams. Digital transformation services have the potential to cater to these needs.
8. Completely Digital-driven: The organization should possess all digital capabilities, such as strategy, culture, relevant technologies, funding, skillset, and more, contributing to a complete digital transformation journey. The digital transformation strategy should also factor in the latest trends and provide a digital transformation framework based on customer requirements.

REVIEW OF LITERATURE

Allan Herminio Vargas Garcia (2021), Digital Banking: Technological Innovation in Financial Inclusion in Peru refers to the technology-driven digital transformation is impacting the financial sector with the entry of new business models such as fintech and bigtech that successfully compete by offering financial products with disruptive potential. Digital banking is the result of the sum of traditional banking and the internet that offers banking services through a website or mobile application. The integration of financial services into digital ecosystems represents a challenge for traditional banking that needs to evolve to face the changing environment. Digital banking plays an important role in financial inclusion, as it allows access to innovative services to more Peruvians and boosts economic growth. However, a high level of digital fraud also exists, aimed at misappropriating money or blackmailing financial users by means of phishing and the use of malware. Pearson's correlation coefficient, useful for linear relationships, was used to evaluate the variables "digital banking" and "financial inclusion", and SPSS-IBM software was used to tabulate the results. **Shanti, R., Siregar, H., Zulbainarni, N., & Tony. (2023)** Digital technology has been raising the competition between banks and other financial service providers, and encourages banks to undergo digital transformation and introduce innovation in their products and services.. A few research studies have examined the digital transformation effects on bank's financial performance. This research aims to examine the digital transformation's effect on bank profitability, specifically on banks with digital business models. Using digital banks' profitability as the object is the novelty of this study, whereas previous research on bank profitability focused solely on traditional banks. The result of the analysis indicates the U-shape relationship between digital transformation and bank profitability, as the digital transformation significantly supports the bank's profitability in the long run, while it causes profitability deterioration in the short run due to the huge IT investment. This study recommends that banks need to consider the cost of IT investment as well as the required time and optimum strategy in undergoing the digital transformation and achieving targeted profitability.

METHODOLOGY

Research methodology is an academic activity and as such the term should be used in a technical sense on digital banking sectors. A Random sampling techniques is used for data collection. Both primary and secondary data collection with a questionnaire is framed on sampling size of 60 banking customers on digital transformation in banking with a SPSS software.

OBJECTIVES

1. To describe the current trends on digital transformation on banking sectors
2. To study the factors and power on digital transformation on banking sectors

HYPOTHESIS TESTING

1. **H1:** Mean difference in between trends and DT banking system
2. **H2:** Mean difference in between factors and DT banking system

ANALYSIS AND INTERPRETATION

Percentage analysis on Digital Transformation on Banking Sectors

Trends on DTBS	Respondents	Percentage
AI and ML	25	42
BC	10	17
IOT	10	17
CC	5	7
BDA	10	17
TOTAL	**60**	**100**

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Factors		
Customer is Crucial (CC)	10	16
Continuous Improvement (CI)	5	9
Modernize Infrastructure (MI)	12	20
Operating Model (OM)	8	14
Identify Viable Solutions(IVS)	6	10
Leverage the Power of Data (LPD)	9	15
Improve Skill Set (ISS)	7	11
Completely Digital-driven (CDD)	3	5
TOTAL	**60**	**100**
Powers		
Unified Customer Data (UCD)	8	13
Seamless Interactions (SI)	7	12
Personalized Marketing (PM)	10	16
Efficient Sales Processes (ESP)	12	20
Proactive Customer Service (PCS)	18	30
Enhanced Security (ES)	5	9
TOTAL	**60**	**100**

Source: primary data

Majority of the trends on DTBS are Artificial Intelligence and Machine Learning (42%), and factors on DTBS are Modernize Infrastructure (MI) (20%) and powers on DTBS are Proactive Customer Service (PCS) (30%).

Reliability Test on Digital Transformation on Banking Sectors

Particulars	No of Items	Range	Cronbach's Alpha	Comment
System on DT banking sectors	60	1-5	0.882	Accepted
Trends on DT banking sectors	60	1-5	0.845	Accepted
Factors on DT banking sectors	60	1-5	0.798	Accepted
Power on DT banking sectors	60	1-5	0.845	Accepted
Overall Score for Sample Adequacy (Kaiser-Meyer-Olkin Measure of Sampling Adequacy)	0.827			
Overall Score for Data Reliability (Cronbach's Alpha)	0.832			
F Value	217.624			
Significant (5 per cent)	0.000			

Hypothesis testing on Digital Transformation on Banking Sectors system, trends factors and powers are highly internal consistency which is more than 0.8. Hence the reliability of the question is proved i.e., the questionnaire is reliable for the purpose of data analysis.

H1: Mean difference in between trends and DT banking system

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Chi Square Analysis on Trends and DT Banking System

Pearson Chi-Square	Calculated Chi-square Value	Df	Table value	S/NS	Remarks
Trends And DT Banking System	13.443 [a]	8	15.51	S	Rejected (H0)

Pearson's chi-square value of the above table is 13.443[a] and table value is 15.51 at 5% level of significant. Hence, the null hypothesis (H_0) has been rejected and the alternative hypothesis (H_1) has been accepted. Mean Variation in between trends are significantly with DT banking system

H2: Mean difference in between factors and DT banking system

Chi Square Analysis on factors and DT banking system

Pearson Chi-Square	Calculated Chi-square Value	Df	Table value	S/NS	Remarks
Factors And DT Banking System	19.567 [a]	14	23.685	S	Rejected (H0)

Pearson's chi-square value of the above table is 19.567[a] and table value is 23.685 at 5% level of significant. Hence, the null hypothesis (H_0) has been rejected and the alternative hypothesis (H_2) has been accepted. Mean Variation in between factors are significantly with DT banking system

CONCLUSION

The research study on digital transformation through digital innovation on banking sectors an overview is more customer satisfaction on digital transformation. The fast-changing market, seamless service delivery, high-end user experience, personalized product experience, transparency, and security are the core customer satisfaction on banking sectors. On crucial to adopt a stepwise implementation approach, make priority-wise investments, and foster a culture of collaboration across cross-functional teams to achieve the desired results. The digital transformation services, provide expert guidance, ensuring a smooth transition to modernized, scalable infrastructure that aligns with business goals and leverage the latest technologies to drive innovation, improve customer experiences, and achieve long-term success. To be concluded that majority of the trends on DTBS are artificial intelligence and machine learning (42%), and factors on DTBS are modernize Infrastructure (20%) and powers on DTBS are Proactive Customer Service (30%).

REFERENCE

1. *Guerra-Leal, E.M., Arredondo-Trapero, F.G. and Vázquez-Parra, J.C. (2023), "Financial inclusion and digital banking on an emergent economy", Review of Behavioral Finance, Vol. 15 No. 2, pp. 257-272.*
2. *Papathomas, A., Konteos, G. 92014), Financial institutions digital transformation: the stages of the journey and business metrics to follow. J Financ Serv Mark* **29**, *590–606.*
3. *Selimovic, J., A. Pilav-Velic, and L. Krndzija. 2021. Digital workplace transformation in the financial service sector: Investigating the relationship between employees' expectations and intentions. Technology in Society 66: 101640.*
4. *Papathomas, A., and G. Konteos. 2022. Digital transformation journey for incumbent banks: The case of the Greek financial institutions. International Journal of Marketing Studies 14 (2): 13.*
5. *Luiz Antonio Bueno, Tiago F.A.C. Sigahi, Izabela Simon Rampasso, Walter Leal Filho, Rosley Anholon, (2024), Impacts of digitization on operational efficiency in the banking sector: Thematic analysis and research agenda proposal, International Journal of Information Management Data Insights, Volume 4, Issue 1, 2024, 100230, ISSN 2667-0968.*
6. *Asfour, R. Al-Dmour, A. Al-Dmour (2022), Validation of the impact of marketing knowledge management on business performance via digital financial innovation as a mediating factor, VINE Journal of Information and Knowledge Management Systems, 52 (2022), pp. 33-56.*
7. *Shanti, R., Siregar, H., Zulbainarni, N., & Tony. (2023). Role of Digital Transformation on Digital Business Model Banks.* Sustainability, 15*(23), 16293.*