Research Article

An analysis of the effects of using the metaverse to improve efficiency in a competitive environment in the Banking Sector

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ABSTRACT

The metaverse is set to disrupt the banking and financial industry in an effective manner. The application of virtual reality and augmented reality offers innovative experience to the customers, which will create opportunities in the banking domain. The collaboration of VR and MR creates critical digital contact with real-world experience and support in augmenting the services in an effective manner. This will enable in creating rich experience and seen as the motive for many opportunities in the industry. The integration between AI and 5G will support the metaverse in enhancing the growth potential for better advantage and offering enhanced solutions. The study is focused on using the quantitative research tools for performing the analysis. The researchers focus on collecting information through survey method. Various closed ended questions are framed for understanding the responses of the sample population who are currently working in the banking industry.

Key words: ABC

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INTRODUCTION

Metaverse is set to disrupt the banking and financial industry in an effective manner, the application of virtual reality and augmented reality offers innovative experience to the customers which will cre- ate opportunities in the banking domain. In today's competitive environment, digitization is the key to possess better interaction with the customers and other stakeholders, understand their growing needs an offer innovative and creative solution for realizing the goals of the organization. (Koh et al., 2018). The collaboration of VR and MR creates critical digital contact with the real-world experience and support in augmenting the services in an effective manner. This will enable in creating rich experience and seen as the motive for many opportunities in the industry. The integration between AI and 5G will support the metaverse in enhancing the growth potential for better advantage and offering enhanced solutions (Alameda, 2020).

The metaverse is considered as the means of interacting with the individuals in an effectively this enables in addressing the need and requirements of the stakeholders effectively. In the financial services industry, employees are focusing in using the virtual reality (VR) and augmented reality (AR) for better interaction with the customers. It has been observed that the financial technology companies are sup- porting the financial services industry in making better integration with their customers and offer better services to them effectively. Many financial services companies are focusing in using the new technol- ogy so as to increase efficiency and provide speed of services, this leads to better customer engagement and experiences. The progressive growth in the IT has prompted in leveraging the digitalization of final services and enhance sustainable growth and development. (Bathla et al., 2021).

The advent of metaverse supports the financial services industry in improvising the customer experience by offering various real time experiences. Moreover, these tools enable in supporting efficiency, possess better engagement with the customers and create augmented virtual interactions for better experience.

The study is focused in using the quantitively research tools for performing the analysis, the research- ers focus to collect information through survey method, various closed ended questions are framed for understanding the responses of the sample population who are currently working in the banking industry, nearly 82 respondents

were chosen based on convenience sampling method. The researchers also gathered information from published journals, magazines, research reports to understand the impact of metaverse in the banking domain and to build the literature based on the same. (Liao et al., 2020).

On a conceptual level, metaverse is stated as the virtual reality space where the users can interact with each other, enable in possessing better gaming experience, render services and provide better engagement through enhanced collaboration in similar manner the things happen in the real world. The application of metaverse is gaining more importance in business as it enables in gaining better interaction with the customers effectively, analyse the overall requirements and support in better visual experiences. The combination of augmented reality, virtual works has enhanced the elements like light, sound and other sensory perspectives which can replicate the real-world experiences.

The term metaverse (is a combination of two words viz., meta and universe), is a virtual world which supports in combining critical technologies like the virtual reality and augmented realty for better perfor- mance. The enhanced technology supports in better interacting and shared virtual universe for providing better services, support in creating better and interconnected virtual experiences through the usage of technology. The digital world has compelled businesses to enhance their offerings to the customers, enable in understanding the requirements in an effective manner. The Metaverse is bound to become an effective digital domain which will enable in increasing the personal and business interaction, connect with the members around the world at quick span of time.

The implementation of metaverse supports in offering the banks with the needed support in brin- ing in the humanity into the virtual world, enable in creating deeper connections with the customers, understand their needs, requirements and issues, offer support which enhances their experience with the banking companies. The advent of intelligent analytics will enable financial services companies to leverage the amount of consumer data to better understand and serve customers. The technology has also helped organizations develop innovative financial services. Developing better payment systems is a major challenge for organizations. It is also possible that robot consulting will be an important applica- tion in the future. (Bathla and Awasthi, 2021). Likewise, blockchain-based services will become more and more popular in the coming years. The digitalisation of financial services is an ongoing revolution. Companies can choose to place innovation at the heart of each organization or integrate it into their organization. Companies would do well to have a complete set of engineers who can streamline innova- tion management while following a start-up strategy. Financial services organizations can leverage the potential of the cloud to make processes more transparent and facilitate collaboration.

Furthermore, the metaverse supports in creating new opportunities in enhancing the interaction with the customers, enable in attracting new customers mainly the younger generation who are NFT (non-fungible token), which is the future using the internet and other tools for better interaction which supports in shared virtual environment where people interact through 3-dimension avatars (Bathla and Awasthi, 2021). The usage of metaverse enable in creating the connection with the customers in an ef- fective manner, the first aspect is to use the ATMs to possess better interaction, wherein the customers can deposit money or withdraw funds, use the tools to open fixed deposits or transfer money from one branch to another branch or apply for loans etc. These aspects enable the customers to use the available opportunities and get the needed services effective. Through the usage of VR and AR the banks can support in making high value services at lower cost, also enable the customers to use the AR for open- ing bank accounts by sitting at their homes and use their smart phones by making investments in stocks, Exchange traded funds etc.

Moreover, in payments related, the metaverse enable in verifying and identifying the sender and receiver of the funds, enable in quick analysis and make the payment so that it can be processed on a real time basis. This supports for better service offerings by the banking companies, enable in reducing the waiting time of making the payments, investments etc.

Metaverse can act as a broader strategy for the banking companies as the new generation custom- ers are looking for more sophisticated services and do not need to spend more time on normal banking transactions, hence, to attract and retain these customers the banks are forced to move in using the VR and AR experiences for better services. (Bathla et al., 2021)

This paper is intended to understand the impact of using metaverse by banking companies for aug- menting performance in the competitive environment. The critical determinants considered for the study are customers can have personalized communication, support in making virtual investments quickly and enhanced security.

LITERATURE REVIEW

Many financial institutions also use augmented reality and virtual reality to enhance the customer experi- ence. Many banks have AR apps that help customers find the nearest banks and ATMs. When in a city, they can scan the area with their phone and see real-time information about the location, distance and services of nearby banks. Some real estate agencies have apps that allow customers to browse and scan home with their phones or tablets to get more detailed information about the property. Special options that we will see soon are mortgage calculators and 3D interiors in an AR environment. Mobile banking and banking are already here only for digital use. But one day we may soon go to a virtual bank. If for some reason customers are unable to visit a physical account, they will soon be able to visit a virtual account. The hope is that these accounts can provide the same services, but only in a VR environment. This experience not only benefits customers but also reduces costs for banks as they no longer need to invest in physical locations.

In order to provide high quality services to customers, financial institutions must ensure that they recruit the best talent and train all employees to provide them with the skills they need to perform their job in the best possible way. Some banks use virtual reality to show newcomers to new technology how innovative and knowledgeable the bank is. Potential employees, as well as current employees, use this platform to build teams and create applications that help the bank's customers. We often talk about mil- lennials because they grew up in a completely different world than their parents or grandparents. As a generation that grew up with technology, they look at many systems differently than other generations. In fact, according to the Millennium Disruption Index, 73% of Millennials turn to Google, PayPal and Apple for financial products, compared to local banks. 33% of them believe that the banks will not need them in the near future. Banks and other institutions wishing to leverage their group, as well as future generations, will incorporate more technologies into their systems, including AR and VR, to attract and retain customers.

As technology continues to evolve and these cohesive realities become more common, financial institutions need to keep pace to attract and retain customers and employees. The worlds of augmented reality and virtual reality have already influenced how financial institutions interact with customers, train employees, deliver services and manage data. As these technologies evolve, the financial industry must keep up with customers of non-financial institutions, otherwise it risks losing customers from non- financial institutions, or worse, their relevance (Zhou et al., 2021). When consumers become partners in the post-universe, the marketing relationship with them changes from definition to partnership. In addition, virtual environments can be used in a consumer-oriented way.

RESEARCH METHODOLOGY

The author focuses in applying the quantitative research approach for the paper, this method supports in making quantitative interpretation of the data collected for the study, furthermore, it can be stated that the closed ended questionnaire is used so as to generate responses from the sample population who are the employees working in the banking companies. The author applies closed ended questionnaire and the sample population are chosen using convenience sampling method. Nearly 82 respondents are cho- sen for the study and information are gathered from them. The authors also use secondary sources like published articles, business magazines, newspaper sources and others for gathering information related to the study. The data are analyzed using MS Excel and interpretation are stated for better understanding.

ANALYSIS AND INTERPRETATION

The authors have used percentage rate analysis and regression analysis for the study, the responses are received from 82 sample population and they are consolidated in table and graphical representation.

Percentage Rate Analysis

Q1. Share your responses on the impact of virtual payments through the metaverse in enhancing the customer experience?

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Table -1 Virtual payments

Responses	Frequency	in %
Strongly Disagree	11	13.41%
Disagree	6	7.32%
Neutral	13	15.85%
Agree	19	23.17%
Strongly Agree	33	40.24%
Total	**82**	**100.00%**

(Source: Self-developed)

Q2. Share your responses on the aspect whether metaverse enable in existing functionality in the banking domain?

Table -2 Better functionality through 3D

Responses	Frequency	in %
Strongly Disagree	7	8.54%
Disagree	6	7.32%
Neutral	8	9.76%
Agree	23	28.05%
Strongly Agree	38	46.34%
Total	**82**	**100.00%**

(Source: Self-developed)

It has been observed by the researchers and business practitioners that the application of metaverse enable in creating better functionality though the 3 D aspects, this functionalitycreates better experiences between the customers and employees, support in understanding the needs and requirements, create bet- ter one to one relationship. Hence, metaverse is set to support the banking companies effectively. Based on the analysis is it noted that 46.34%have strongly agreed to the statement that metaverse enable in existing functionality in the banking domain, also 28.05%have agreed to the same.

Q3. Is metaverse attract new markets and services for the banking industry which fuels growth and development?

Table -3 Metaverse enable in attracting new markets

Responses	Frequency	in %
Strongly Disagree	11	13.41%
Disagree	9	10.98%
Neutral	10	12.20%
Agree	36	43.90%
Strongly Agree	16	19.51%
Total	**82**	**100.00%**

(Source: Self-developed)

Regression Analysis

The next part of the analysis is involved in using regression for measuring the impact of independent variables on the dependent variable. The independent variables considered for the study are: customers can have personalized communication, support in making virtual investments quickly and enhanced security. The dependent variable is measuring the impact of metaverse on banking industry.

Table -4 Regression analysis

Model	B	t	P Value
(Constant)	0.23	1.23	0.01
Personalized communication	0.25	3.43	0
Virtual investments	0.39	2.62	0
Enhanced security	0.32	2.11	0
F	**215.06**		
Sig.	**0**		
R squared	**0.805**		

(Source: Created by the researcher)

The table states that the value of R squared is 0.805 which is nearly 80% hence the model is stated to be the best fit, furthermore all the independent variables possess p value of less than 5% hence, they possess significant association. Also, the regression equation is stated as Y (Impact of metaverse in the bank industry) = 0.23 + 0.25 x Personalized communication + 0.39 x Virtual investments +0.32 x Enhanced security

DISCUSSION AND FINDINGS

Metaverse aims to effectively disrupt the banking and finance industry, provide virtual reality and aug- mented reality to provide an innovative customer experience that creates opportunities in the banking industry (Hassani et al., 2020). In today's competitive environment, digitization is the key to better inter- acting with customers and other stakeholders, understanding their growing needs and finding innovative and creative solutions to achieve an organization's goals. Collaboration between VR and MR creates a critical digital connection with real experience and support for efficient service growth. This creates a lot of experience and motivates many opportunities in the industry (Demirguc-Kunt et al. 2017).

The integration between artificial intelligence and 5G will support the post-universe, improve development capacity to get better benefits and offer better solutions. Applying a metaverse becomes important in business because it helps you better interact with customers in an effective way, analyze global require- ments and support better visual experiences. The combination of augmented reality and virtual works includes enhanced elements such as light, sound and other sensory perspectives that can reproduce real experiences. The Metaverse app will help banks provide the support they need to bring humanity into the virtual world, enable deeper customer relationships, understand their needs, requirements and problems, and provide support that enhances their banking experience. In addition, for linked payments, the metaverse helps to verify and identify the sender and recipient of money, allowing the payment to be analyzed and executed quickly so that it can be processed in real time. This supports better service offerings from banking companies, reduces waiting times for payments, investments and so on.

CONCLUSION

Metaverse can be used to effectively get in touch with customers, the first is the use of ATMs for better interaction, where customers can deposit or withdraw money, use funds to open time deposits, transfer money from one account to another, apply about loans etc. These considerations allow customers to take advantage of available opportunities and effectively access the services they need. By using virtual reality and augmented reality, banks can help create valuable services at a lower cost, as well as allow custom- ers to open a bank account while sitting at home and using their augmented reality smartphone. invest in stocks, trade on the stock exchange. funds, etc. The study focuses on using quantitative research tools to carry out the analysis, the researchers focus on gathering information through the research method, formulating several closed questions to understand the answers to a sample of the population currently working in banking. sector and selected almost 82 respondents using a simple sample.

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