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Adoption of Mobile Phone Based Mutual Fund Investment Applications Among Retail Investors: Empirical Evidence from UTAUT Model

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Abstract

Objective- This study aims to analyse acceptance of mobile phone based mutual fund applications. The objective, in other way examines how mutual fund mobile apps affect retail investors' investment decisions.
Methodology- Under the Unified Theory of Acceptance and Use of Technology (UTAUT), the paper observed retail investor's adoption behaviour prediction. The data was collected during April–September, 2023 using structured questionnaire. Based on total 258 viable replies, the study used multiple regression and regression coefficient analysis.

Results– The study found that effort expectancy (EE), performance expectancy (PE), social influence (SI), facilitating condition (FC), and habit (H) influenced retail investors' mutual fund mobile app use. Hedonic motivation did not affect retail investors' mutual fund mobile application behavioural intention.

Keywords- Mutual fund, mobile application, investment behavior, performance expectancy.

Introduction

The present global society is characterized by a notable transition towards the ongoing and extensive incorporation of technology into diverse facets of everyday existence. The rate of technological advancement has experienced a notable deceleration compared to previous historical periods, leading to a proactive stance by global leaders in advocating for the widespread adoption and effective utilization of cutting-edge technologies (Malik M, 2020). The utilization and acceptance of the internet and financial services among its user base are experiencing a gradual increase. However, it is important to note that complete adoption and acceptance have not been achieved among all users at this time. In the realm of scholarly inquiry, a significant body of examine has been undertaken over the span of the previous two decades, delving into the intricate realm of consumer acceptance, utilization patterns, and the multifaceted determinants that shape the adoption of internet and financial technology. The investigation and analysis of the adoption and utilization of technology is a subject of extensive research, which is conducted using a range of theoretical models (Hafeez et al., 2018). The study of the effects brought about by technological advancements on individuals' lives has consistently piqued the curiosity of numerous scholars in the field of social sciences throughout history. When the innovations are integrated with individual mobility, they have the potential to yield positive results in both social and professional domains. Mobile telephony and the Internet are widely recognized as transformative mobile technologies that have had a noteworthy effect on contemporary culture. These technologies have become the topic of extensive study due to their profound importance and influence (Alves, 2006). In addition to various sectors, the banking sector has demonstrated a proactive response to the emergence of a significant trend by adopting and integrating electronic payment and mobile banking services into their operations. "Financial assistance through the internet refers to the facilitation of diverse financial products and services via an electronic platform, such as an internet browser or a mobile phone application (Malik M, 2020). Mobile communication services are characterised by their portability and pervasiveness, allowing users to access them from various locations. Additionally, users possess a comprehensive understanding of their mobile devices and their functionalities. The cell phone, particularly the smartphone, serves as the central hub for the convergence of communication and entertainment. The mobile services being examined are intricately interconnected with a wide array of technologies, including network infrastructure, software systems, and communication equipment. (Nair et.al., 2022).

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Firms operating within domains of communication and payments exhibit a strong inclination towards capitalizing on favourable business prospects that arise from effectively addressing the prevailing concerns and demands in these sectors (Overbar, 2014). The attributes of flexibility, mobility, and efficiency have been identified as crucial factors in effectively addressing common challenges or fulfilling the desires of their respective users. These attributes have been recognised as key elements that contribute to the successful resolution of various issues and the satisfaction of user needs. One tendency is mobile payment. This method involves mobile device purchases, payments, and transfers without cash or banks (Rao & Troshani, 2007). Mobile devices, including mobile phones and smartphones, have the capability to initiate, enable, or validate payments across various contexts. (Karnouskos and Fokus,2004).

Literature Review

Mukherjee and Nath (2003) in their study, disclosed that the determinants of trust in a buyer-seller relationship were primarily influenced by share value and privacy. These aspects were found to have a important impact on the level of commitment exhibited by the buyer towards the seller. The role of communication in establishing trust and fostering relationships on the internet was found to be relatively secondary in nature. In the study conducted by **Abushanab and Pearson (2007)** revealed that performance expectancy and effort expectancy emerged as significant factors influencing individuals' intention to adopt internet banking services. Furthermore, it is worth noting that age has been identified as a significant variable that exerts an influence on the observed behavioural intention. The study conducted aimed to examine the influence of social factors on internet banking adoption. While previous research has acknowledged the impact of social influence on this decision, the current study did not find any significant age-related factors that influenced this association. **Mukherjee and Nath (2007)** in their investigation, indicated a noteworthy and positive association between trust and commitment within relationships. The importance of share value as a critical factor in cultivating long-lasting relationships built on trust cannot be overstressed. The findings of the study suggest that a statistically insignificant correlation exists between termination cost and commitment. The study revealed that trust and commitment exerted a noteworthy influence on consumers' behavioural intention. Another study conducted by **Azam et. al. (2012)** concluded that security and privacy were the most important determinants of consumer trust and had a noteworthy effect on the development of consumer trust in e-commerce. The research showed how security and privacy are handled differently in online shopping, as well as how individually vitally important security and privacy are to those who shop online. **Akturan and Tezcan (2012)** used the Technology Acceptance Model (TAM) to examine youth mobile banking acceptance. This study found that youth adoption of mobile banking is driven by perceived advantage, usefulness, performance risk, and social risk. This influences young people's decision to use mobile banking as a financial instrument. The study also found no association between attitude, perceived financial risk, and perceived security risk. **Mawere et al. (2013)** indicated that there were numerous factors that had a significant impact on the propensity of mobile users in Zimbabwe to use mobile banking as a means of conducting financial transactions. Perceived utility, trust, perceived ease of use, subjective norms, and external impact were some of aspects that were taken into consideration. It was essential to recognise that the elements all work together to influence the likelihood that mobile consumers will use mobile banking services. **Prajapati, et al. (2013)** identified that, trust, security, awareness, privacy, and innovativeness were significant variables in embracing online banking among clients associated to the state of Gujrat. The study also revealed other characteristics that influence acceptance of online banking among customers. Based to the conclusions drawn from the study, customers' needs should be prioritised when designing bank websites to address concerns regarding privacy and safety. **Hussein and Saad (2016)** in their study, revealed a positive and significant association between perceived usefulness security, financial, and privacy risks and internet banking intention. According to the study, perceived ease of use including awareness, computer self-efficacy, and resistance to change also favourably and significantly affects internet banking intention. **Sobti (2019)** indicated favourable conditions and behavioural goals positively affect mobile payment system uptake and use. Age was positively correlated with effort expectancy, behavioural intention, social influence, and facilitating situations and usages in younger users. Education and gender did not affect any UTAUT components in the analysis. **Abbass et al. (2019)** found that customers placed significant importance on several factors when making decisions regarding the adoption of mobile banking. These factors encompassed perceived trust, perceived cost, perceived simplicity of use, and perceived danger. **Saparudin et al. (2020)** observed that there was a substantial connection between trust, social influence, effort expectation, and performance expectancy. Additionally, trust was originated to be significantly affected by performance, effort expectancy, and social influence. The findings of the study revealed that the factor with the most significant impact on an individual's adoption of mobile banking in Jakarta was the perceived level of effort required. **Susilowati et al. (2021)** examined the aspects that influence the acceptance of BCA mobile banking services. In the context of the observed correlation, it is noteworthy to mention that only the variable of effort expectancy exhibited a strong positive correlation with both social influence and performance expectancy. The influence of age on various factors, such as effort expectancy, facilitating conditions, behavioural intention, and usage, has been observed to have a positive impact, particularly within the younger age group. The use behaviour of individuals is significantly and positively influenced by

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factors such as price value, habit, and hedonic motivation. **Handoko and Mozes (2021)** revealed that the variables of Perceived Ease of Use and Trust have a significant impact on investor intention to utilize mutual fund mobile applications. However, it was found that variables such as Perceived Usefulness, Financial Technology Knowledge, and Perceived Security did not have a significant impact on investor intention to use mutual fund mobile applications. **Rahadi et.al. (2021)** concluded that six variables that have a significant impact on behavioural intention. These variables included Performance Expectancy (PE), Effort Expectancy (EE), Perceived Trust (PT), Habit (HT), Hedonic Motivation (HM), and Price Value (PV). The Performance Expectancy (PE) and Effort Expectancy (EE) were influenced by two key variables: Content Design Quality (CDQ) and User Interface (UI). In a study by **Nair et al. (2022)**, the objective of the research was to assess the adaptable behaviour of investors as a response to the use of mobile applications for online trading. According to the findings of the study, the determinants of perceived return and expectation have a relatively minor impact on the behaviour of online traders. On the other hand, it turns out that habit and intentional behaviour are the key forces behind engaging in online trading activities.

Research Gap and Relevance of the Study

Mobile phones have intensified the access of various investment avenues, particularly for retail investors. Increased participation of retail investors through mobile apps is the evident in present scenario. Several studies have been conducted towards adoption of mobile apps while investing in stock market but the extent to which mobile apps have been accepted for investing in mutual funds has rarely been explored. Portfolio churning might have also increased with mobile app-based transactions. Therefore, exploring determinants and willingness, will give a new insight towards behavioural aspect of retail investors towards mutual fund mobile apps. Which further may be utilised for the purpose of escalating the growth of mutual fund investment through mobile apps.

Moreover, most of similar have been conducted in large cities. However, there has been limited studies/no studies on adoption of mobile applications for mutual fund investment by retail investors in eastern region of Uttar Pradesh. Therefore, the study focuses upon adoption of the mobile phone application for investing mutual fund in eastern Uttar Pradesh, thus, the paper intends to seal the gap and add to the present literature.

Research Objective:

- To examine the impact of factors affecting (as identified by UTAUT Model) mutual fund mobile app adoption by mutual fund investors.

Hypothesis of the study:

- Mutal fund investors with high performance expectancy for mobile app based mutual fund investment will have greater behavioural intention to use mutual fund mobile app.
- Mutal fund investors with high effort expectancy for mobile app based mutual fund investment will have greater behavioural intention to use mutual fund mobile app.
- Mutal fund investors with high degree of positive social influence from their friends and family members will have a larger behavioural intent to operate mutual fund phone-based app.
- Mutal fund investors with high degree of positive facilitating condition for mobile app based mutual fund investment will have greater behavioural intention to use mutual fund mobile app.
- Mutal fund investors with high degree of positive hedonic motivation for mobile app based mutual fund investment will have greater behavioural intention to use mutual fund mobile app.
- Mutal fund investors with high degree of positive habit for mobile app based mutual fund investment will have greater behavioural intention to use mutual fund mobile app.

Methodology:

- **Data Collection**

To procure the necessary data, a non-random sampling technique, specifically convenience sampling, was employed to establish contact with suitable study participants, namely users of the mutual fund app. This facilitated the establishment of communication with suitable participants for the study, specifically individuals who utilise mutual fund applications. After the distribution of invitations, participants were granted a duration of seven weeks to complete the survey. Throughout this time frame, a total of 282 responses were collected from the participants, utilising both online platforms such as Google Forms and offline questionnaires. Following the elimination of responses that were deemed invalid and values that were missing, a total of 258 valid responses remained in our sample. The responses obtained in this study were derived from a diverse group of participants with varying levels of proficiency in utilising mobile applications for mutual fund purposes.

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- **Constructs**

Determinants that found in previous study are based on *demographic factors* (N. Murugeswari 2009; Rao, 2010), *Economic factors* (Fredrik et. al., 2014; Kavita 2017; Nithya D 2017), *Socio Cultural factors* (Dragota et. al., 2016), *Performance Expectancy* (Mawere et al.,2013; Khan 2019; Saparudin et. al., 2020; Nair et al., 2022), *Effort Expectancy* (Saparudin et. al., 2020; Nair et. al., 2022), *Social Influence* (Saparudin et. al., 2020; Nair et. al., 2022) Security Risk (Tai & Ku, 2013). Hedonic Motivation (Mawere et al.,2013; Khan 2019; Saparudin et. al., 2020; Nair et al., 2022), Habit (Mawere et al.,2013; Khan 2019; Saparudin et. al., 2020; Nair et al., 2022) Behavioural Intentions (Mawere et al.,2013; Khan 2019; Saparudin et. al., 2020; Nair et al., 2022). In context of my study selected constructs are as follows:

Table:1

Constructs	Meaning For the Study
i. **Performance Expectancy (PE)**	The grade to which a person thinks that operating of the mutual fund mobile app will help him to gain more.
i. **Effort Expectancy (EE)**	The grade of comfort related with the operate of mutual fund mobile app for investing.
i. **Social Influence (SI)**	The degree to which consumer observe that important to others believe that they should use mobile app for investing mutual fund.
v. **Facilitating Condition (FC)**	States to investors believes the resources and technical infrastructure exist for support to use of the app performance for investment.
v. **Hedonic Motivation (HM)**	The pleasure gain from operating mutual fund mobile app.
i. **Habit (H)**	The degree to which people tend to use mutual fund mobile app automatically.
i. **Behavioural Intentions (BI)**	The motivational factors that directly influence more likely to adapt the mutual fund app.

Results and Discussion:

The study employed multiple regression analysis to examine the model and investigate the relationships among latent variables, including performance expectation, effort expectation, social influence, facilitating condition, hedonic motivation, and habit. The primary focus was to assess their impact on the dependent variable, namely, behavioural intention Conducting random sampling for the entire population of potential users of mobile applications offered by mutual fund companies in eastern Uttar Pradesh poses challenges due to the absence of an appropriate sampling frame.

Table 2 exhibits demographic profile of the respondents. A total of 258 were received from three districts; Varanasi (98) Prayagraj (87) and Gorakhpur (73). Out of total 258 respondents, 85 percent were male and only 15 percent respondents were female participants for the study. Education profile indicates that majority of respondents (176) have PG degree of higher qualification followed by graduation (59) and intermediate level (23) education. 124 respondents observed to be private sector employee. 79 respondents represented govt. sector whereas only 38 and 17 respondents represented professional engagement and farmer respectively. As far as experience in mutual fund investment is concerned, majority of respondents 163 (63%) had experience level of 0-3 years whereas 73 (28%) respondents had experience level of 3-5 years. Only 22 (9%) respondents had experience level of more than five years.

Demographics Information

Table:2

Description		Frequency	Percentage
District	Prayagraj	87	34
	Gorakhpur	73	28
	Varanasi	98	38
Gender	Male	219	85
	Female	39	15
Age	Young age group (18-35)	201	78
	Middle age group (35-60)	57	22
	Old age group(60-above)	0	0
Education Level	Up to Intermediate level	23	9
	Graduate	59	23
	PG and Higher	176	68
Engagement	Gov. Emp.	79	31

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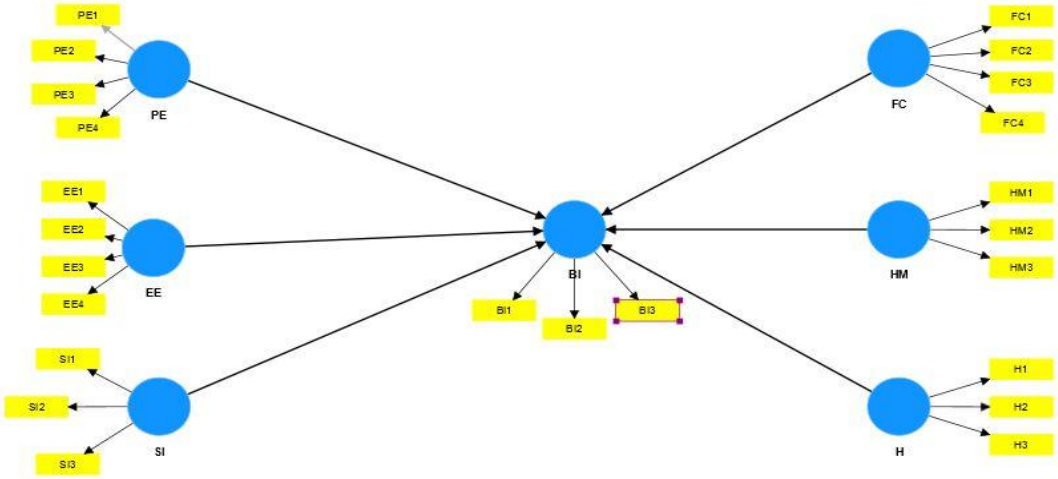
	Pvt Emp.	124	48
	Professional/Entrepreneur	38	15
	Farmer	17	7
Mutual Fund Investment Experience	0 to 3	163	63
	3 to 5	73	28
	5 Above	22	9

Study Model:



Reliability Analysis

The incorporation of *Cronbach's alpha test* in the computation was conducted to provide an assessment of the internal consistency and consistency of the measurement scales. In the context of consistency assessment, it is commonly observed that variables exhibiting a value surpassing 0.6 are generally regarded as reliable. Furthermore, it is important to note that the variables that exhibit values exceeding 0.9 are the most reliable. In contrast, variables that possess values lower than 0.6 are considered incongruous with the established reliability scales. The scales under consideration propose that to establish the reliability of a scale, it is advisable to ensure that the Cronbach's alpha value exceeds the threshold value of 0.6. The assessment of the reliability of the variables was conducted through the Cronbach's alpha test.

Table 3: Cronbach's Alpha

Constructs	Cronbach Alpha Value	Item in Construct
PE	.932	04
EE	.958	04
SI	.839	03
FC	.879	04
HM	.867	03
H	.737	03
BI	.943	03

Table no.3 shows the results of the consistency through Cronbach Alpha test conducted on seven variables: "Performance Expectancy" (PE), "Effort Expectancy" (EE), "Social Influence" (SI), "Facilitating Condition (FC)", "Hedonic Motivation" (HM), "Habit" (H), and "Behavioural Intentions" (BI). The assessment of reliability for performance expectancy encompassed four distinct items, with each item achieving a commendable score of 0.932 on a scale ranging from 0 to 1.00. The experimental findings yielded an accuracy rate of 93.2%. The assessment of reliability for the construct of effort expectancy involved four items. The resulting overall score yielded a commendable coefficient of 0.958, indicating a high level of internal consistency. This equates to an accuracy rate of 95.8%, signifying a robust measure of effort expectancy. The assessment of social influence was conducted using a questionnaire comprising three distinct questions. The resulting score of 0.839 signifies a reliability level of 83.9%. The facilitating condition encompassed a set of four interrogatives, yielding a resultant value of 0.879, which can be interpreted as an 88 percent

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achievement. The Cronbach's Alpha coefficient for this 24-item questionnaire has been found to be 0.865, suggesting a notable degree of internal consistency among the items. Based on the range of the Alpha Coefficient, the obtained result can be organised as moderate. Consequently, the findings of this study lead to the conclusion that the inquiries pertaining to the seven constructs can be deemed acceptable.

To ensure that the scales have accurate content, the elements that were chosen for the scales need to exactly denote the notion from that simplifications are to be drawn. As a result, a content legitimacy board was put together to reevaluate the items that were compiled from the prior studies to identify the relevance of each item as well as its semantics. Participants in this study included two associate professors, six assistant professors, and all of them had a concentration on financial studies research in their respective areas of expertise.

Table 4: Convergent and Discriminant Validity

	(BI)	**(EE)**	**(FC)**	**(H)**	**(HM)**	**(PE)**	**(SI)**	**(BI)**
BI	**.947**							
EE	.366	**.941**						
FC	.602	.731	**.855**					
H	.693	.376	.724	**.811**				
HM	.377	.721	.802	.638	**.884**			
PE	.503	.695	.838	.593	.681	**.914**		
SI	.472	.874	.577	.605	.818	.727	**.872**	

Bold value are latent construct indication square roots of AVE. Extracted average variance (AVE).

Table 4 shows the average variance extracted (AVE), square root of the AVE, and construct correlations. The Average Variance Extracted measures how well a construct captures variance. Values of Average Variance Extracted (AVE) are used to evaluate convergence. Actual AVE values for each component ranged from 0.811 to 0.947, exceeding the recommended 0.50 threshold. Barclay et al. (1995) define a concept as distinct if its square root of average variance extracted (AVE) exceeds its correlations with other latent constructs. The square root of the Average Variance Extracted (AVE) and construct correlations are compared in this study to determine construct discriminant validity. The bold diagonal figures in the correlation matrix are our focus. By comparing such values, we may see if each concept is more associated with its own measures than others. The constructs' discriminant validity is supported by this analysis.

Table 5: Multiple Regression

Model Name	**R value**	**R^2**	**R^2 Adjusted**	**Standard Error estimated**
1	.681	.464	.456	.634

In Table 5, it is observed that the variable denoted as "R" exhibits a statistically significant positive correlation, as indicated by the obtained correlation coefficient of 0.681. This value corresponds to a percentage equivalent of 68.1 percent. The coefficient of determination, commonly referred to as R square, reveals that the independent variables within the model could account for approximately 46.4% of the observed variance. The present study reveals that the independent variables have been found to describe a significant share, specifically 46.4%, of the variance observed in level of mutual fund mobile app adaptation. The observed adjusted R square value of 0.456, or 45.6%, suggests that the inclusion of additional independent variables did not yield a substantial improvement in explaining the variance of the dependent variable under investigation.

Table:6 Regression Coefficient

Model	Coefficients (Unstandardized)		Coefficients (Standardized)	T value	Sig.
	B value	Std Error	Beta Value		
Constant	1.193	.294		4.052	0.000
PE	.020	.067	.014	0.302	0.762
EE	.015	.015	.040	1.051	0.294
SI	.025	.040	.024	0.624	0.533
FC	.238	.061	.235	3.872	0.000
HM	-.049	.049	-.038	-0.997	0.319
H	.525	.060	.476	8.787	0.000

95.0% confidence level, Dependent variable: Behavioural Intension (BI)

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The table 6 presents the regression coefficients, which provide insight into the beta values of the six self-regulating constructs (PE, EE, SI, FC, HM, H). It is worth noting that six variables exhibit positive beta values. The results advocate that the presence of variables have significant positive impact on the adaptation of mutual fund mobile applications. The outcomes of the paper indicate negative association among one variable, namely, hedonic motivation (HM), and the behavioural intention to use of mutual fund mobile applications. Subsequent regression analysis revealed compelling evidence of a noteworthy correlation between FC (sig=0.000, $p<0.05$) and H (sig=0.00, $p<0.05$) in relation to the adoption of a mobile application for mutual funds. Conversely, the analysis indicated a lack of statistical significance for the variables PE (sig=0.762, $p>0.05$), EE (sig=0.334, $p>0.05$), SI (sig=0.533, $p>0.05$) and HM (sig=0.319, $p>0.05$).

Conclusion

A study examined retail investor behaviour with mutual fund mobile apps. Performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating condition (FC), habit(H), and hedonic motivation (HM) influenced behavioural intention. PE, EE, and SI, are key elements in technology adoption. In practise, the results show that investors use mutual fund mobile apps out of habit. Therefore, retail mutual fund investors should consider these issues before investing. This study has limitations. First, the study examined mutual fund retail investors' mobile app behaviour intention using UTAUT. Future study could involve security, credibility, privacy, or trust. Second, pan-Indian study can grasp investors' various mobile adoption behaviour. Finally, research can examine how retail investors' unobserved heterogeneity affects their investing behaviour using mutual fund mobile application technology.

Reference

1. Abu FB, Jabar JB and Yunus ARB (2014) A Review Unified Theories of Acceptance and Use of Technology (UTAUT): *Technology Empowering and Acceptance in Malaysia. 8th MUCET 2014.* Melaka, Malaysia.
2. Abushanab and Pearson (2007), Internet banking in Jordan: The unified theory of acceptance and use of technology (UTAUT) *Journal of Systems and Information Technology·*
3. Afshan Azam, Pro. Fu Qiang, Muhammad Ibrahim Abdullah (2012) Consumers' E-commerce acceptance model: Antecedents of trust and satisfaction constructs *Article DOI:10.1109/BEIAC.2012.6226086* https://www.researchgate.net/publication/254040801
4. Atul B. Kathole,Jayashree Katti,Dharmesh Dhabliya,Vivek Deshpande,Anand Singh Rajawat,S. B. Goyal,Maria Simona Raboaca,Traian Candin Mihaltan,Chaman Verma and George Suciu, "Energy-Aware UAV Based on Blockchain Model Using IoE Application in 6G Network-Driven Cybertwin" Energies 2022, 15(21), 8304; https://doi.org/10.3390/en15218304. https://www.mdpi.com/1996-1073/15/21/8304
5. Akturan and Tezcan (2012) Mobile Banking Adoption of the Youth Market: Perceptions and Intentions https://www.researchgate.net/publication/235316497
6. Alves (2006) Mobility from Lat. mobilitas – quality orstate of what is mobile or that obeys the laws of motion.
7. Amani Hussein, Mohamad Saad (2016), Perceived Risk and Behavioral Determinants of Using Internet Banking in Egypt, *Journal of Behavioural Economics, Finance, Entrepreneurship, Accounting and Transport, 2016, Vol. 4, No. 3, 40-48, DOI:10.12691/jbe-4-3-1, http://pubs.sciepub.com/jbe/4/3/1*
8. Aniek Susilowatia , Bambang Riantob , Natasya Wijayac , Lim Sannyd (2022), Effects of UTAUT 2 Model on the Use of BCA Mobile Banking in Indonesia, *Turkish Journal of Computer and Mathematics Education, Vol.12 No.10(2021), 686-694*
9. Sonali D. Patil, Roshani Raut, Rutvij H. Jhaveri, Tariq Ahamed Ahanger, Pallavi V. Dhade, Atul B. Kathole, Kapil N. Vhatkar, "Robust Authentication System with Privacy Preservation of Biometrics", Security and Communication Networks, vol. 2022, Article ID 7857975, 14 pages, 2022. https://doi.org/10.1155/2022/7857975.
10. Ansar Abbass, Roman Khan, Shazia kanwal (2019) Factors Affecting the Adoption of Mobile Banking In Pakistan, *GSJ: Volume 7, Issue 7, July 2019, Online: ISSN 2320-9186*
11. Avinandan Mukherjee and Prithwiraj Nath (2003), A model of trust in online relationship banking, *International Journal of Bank Marketing*
12. Bambang Leo Handoko and Lavie Audy Altriana Mozes. 2021. Analysis of Factors Affecting Investor Intention to Use Mobile Online Mutual Fund Application. In 2021 *7th International Conference on E-Business and Applications (ICEBA 2021), February 24, 2021, Sejong, Singapore. ACM, New York, NY, USA, 7 pages.* https://doi.org/10.1145/3457640.3457658
13. A. B. Kathole, K. N. Vhatkar, and S. D. Patil, "IoT-Enabled Pest Identification and Classification with New Meta-Heuristic-Based Deep Learning Framework," Cybernetics and Systems, vol. 0, no. 0, 2022, doi: 10.1080/01969722.2022.2122001.

European Economic Letters
ISSN 2323-5233
Vol 13, Issue 5 (2023)
https://doi.org/10.52783/eel.v14i1.1059
http://eelet.org.uk

14. Hafeez-Baig A, Gururajan R and Wickramasinghe N (2018) Readiness as a Novel Construct of Readiness Acceptance Model (RAM) for the Wireless Handheld Technology. In Technology Adoption and Social Issues: Concepts, Methodologies, Tools, and Applications 27-45.
15. Maira Lescevicaa, Egils Gintersa, Riccardo Mazzab (2013) Unified theory of acceptance and use of technology (UTAUT) for market analysis of FP7 CHOReOS products, *ICTE in Regional Development, Valmiera, Latvia, Procedia Computer Science 26 (2013) 51 – 68*
16. Malik M (2020) Elements influencing the Adoption of Electronic Banking in Pakistan an Investigation carried out by using Unified Theory of Acceptance and Use of Technology (UTAUT) Theory. *Journal of Internet Banking and Commerce 25:2*
17. Mohamad Saparudin, Agus Rahayu, Ratih Hurriyati1 & Mokh. Adib Sultan (2020)**,** Exploring the Role of Trust in Mobile-Banking Use by Indonesian Customer Using Unified Theory of Acceptance and Usage Technology. *International Journal of Financial Research Vol. 11, No. 2;* https://doi.org/10.5430/ijfr.v11n2p51
18. Sonali D.Patil, Atul B.Kathole, Savita Kumbhare, Kapil Vhatkar, Vinod V. Kimbahune,"A Blockchain-Based Approach to Ensuring the Security of Electronic Data", International Journal ofINTELLIGENT SYSTEMS AND APPLICATIONS IN ENGINEERING, IJISAE, 2024, 12(11s), 649–655. https://ijisae.org/index.php/IJISAE/article/view/4486/3145
19. Neharika Sobti (2019) Impact of demonetization on diffusion of mobile payment service in India Antecedents of behavioral intention and adoption using extended UTAUT model, www.emeraldinsight.com/0972-7981.htm
20. Parvathy S. Nair, Atul Shiva, and Nikhil Yadav (2022) Determinants of mobile apps adoption by retail investors for online trading in emerging financial markets, *An International Journal © Emerald Publishing Limited 1463-5771,* https://www.emerald.com/insight/1463-5771.htm
21. Prof. (Dr.) B. A. Prajapati, Maulik C. Prajapati, Vipul B. Patel (2013), Factor Influencing Adoption of Online Banking among Customers: An Empirical Study Special Reference to Gujarat State, *Asian Journal of Research in Banking and Finance Vol. 3, No. 12, December 2013, pp. 60-67. ISSN 2249-7323*
22. Atul Kathole , Dinesh Chaudhari "Secure Hybrid Approach for Sharing Data Securely in VANET", Proceeding of International Conference on Computational Science and Applications pp 217–221, © 2022 The Author(s), under exclusive license to Springer Nature Singapore Pte Ltd.
23. Raden Aswin Rahadi, Elena Kusuma Dewi, Sylviana Maya Damayanti, Kurnia Fajar Afgani, Isrochmani Murtaqi, Dwi Rahmawati (2021). *Review of Integrative Business and Economics Research, Vol. 10, Supplementary Issue 1*
24. Rao, S., & Troshani, I. A. (2007) Conceptual framework and propositions for the acceptance of mobile services. *Journal of Theoretical and Applied Electronic Commerce Research*
25. Talent Mawere (2013) An Analysis of Mobile Banking Adoption in Zimbabwe, *Journal of International Academic Research for Multidisciplinary. ISSN: 2320 – 5083*