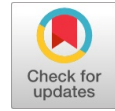# Cognitive Computational Model for Evaluation of Fintech Products and Services with Respect to Vijayawada City, Ap

J.Katyayani., Ch.Varalakshmi

Abstract: Now in the era of artificial intelligence and digitalisation financial sector is adopting various digital tools in their products and services offerings. That's why user acceptance of technology in the financial sector has became the important field of the study. Internet banking, mobile banking,ATM,cash deposit machines, instant payment services, online trading in stock markets, online funds transfers,E-wallets,wealth management, peer to peer lending,blockchain technology are various fintech products and services. This study is an attempt to analyse the users acceptance of technology in their financial management decisions by using cognitive computational model. Cognitive computing provides a great opportunity for users to understand the true nature of risk for the industry especially new upcoming risk such as cyber security. This study mainly focuses on how different cognitive factors such as perceived expenditure, ease of time, level of risk, service quality, frequent use of automated tools, socio cultural factors, perceived trust, perceived usability and perceived convenience to use influence the users motive to adopt and utilise the Financial Technology.

Index terms: Artificial Intelligence, Block Chain Technology, Cognitive Computing, Digitalisation
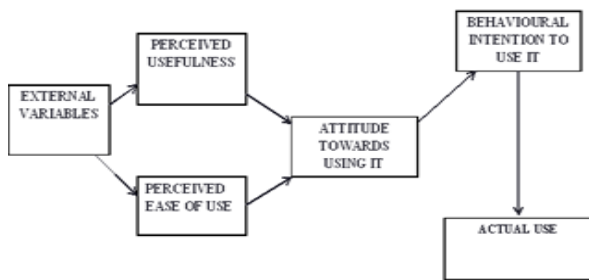
I.INTRODUCTION

FIGURE-1-TECHNOLOGICAL ACCEPTANCE MODEL-1

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Financial Technology is the technical advancement that targets to combat with the conventional financial practices in the finance sector. Financial Technology is an improvised sector in the field of finance. It is applying technology in the field of finance. Mobile banking, internet banking, crypto currency, ATM,block chain are few examples of Financial Technology.Finacial Technology organizations include both startups and existed fintechnology entities.

II. REVIEW OF THE LITERATURE

A.TECHNOLOGICAL ACCEPTANCE MODEL 1

This study is based on the Technological Acceptance Model version -1 proposed by Davis,Bagozzi,Warshaw in 1989.This model specifically deals with the foresight of the acceptance and adoption of an information device. This model widely used in the field of research related to the users perception to adopt technology in their life.

The factors considered are as follows

A.PERCEIVED EXPENDITURE

Perceived expenditure is stated as the level to which a user assumed a cost for utilising information technology tool. The study conducted by Cham,Cheng, Lim Chee, Khin,Bin in Malaysia (2018), argued that up to what extent the perceived expenditure influences the users motive to adopt the Financial Technology products and services and the study conducted by Ying-Feng Kuo,Sheih-Neng Yen (2009) examined that perceived expenditure negatively influencing the attitude of the users to adopt fintechnology.

B.EASE OF TIME

Ease of time means that the level at which user feels that less time will be taken to perform any activity by utilising the system. The study conducted by Chen(2016) in Taiwan found that banking companies are delivering services through the internet platform. Using of digital platform banking services are available to the customers 24*7.So the time saving, less time taking and 24*7avalibality of the fintech services positively influencing the customer perceived opinion towards the adoption of fintechnology.

C.PERCEIVED LEVEL OF RISK

It is stated as the ambiguity faced by a user to utilise the system.Chen(2016) in Taiwan found that perceived risk negatively influencing the users attitude towards adoption of fintechnology. The study conducted by Bhavish Jugurnath, Roucheet Bissessur Preesha Ramtohul Ramen Mootooganagen(2018) in Mauritius argued that perceived level of risk (privacy risk) linking negatively with the users attitude towards adoption of fintechnology.

D.SERVICE QUALITY

Service quality in this study refers that the users perceived superior quality of the service by using the technology. The studies conducted by Malik, Khalil,(2016) in Pakistan, Chen,(2016) in Taiwan argued that service quality positively influencing the users attitude towards adoption of fintechnology.

E.FREQUENT USAGE OF AUTOMATED TOOLS

It states that the level of frequency the user uses the particular tool. The study conducted by Malik,Khalil, (2016) in Pakistan argued that the users frequent utilisation of particular system is positively influencing the users attitude towards adoption of the automated tool.

F.SOCIO CULTURAL FACTORS

The study conducted by Byeong Hoon Yoon , JungRyol Kim2 , YenYoo You1 and SangBong Kim2(2016), in USA,China,Korea argued that the customer perception towards fintechnology products and services will vary based on socio cultural factors of the users.

G.PERCEIVED TRUST

Perceived trust means that the level of users confidence to use a particular system. The studies conducted by Malik,Khalil,(2016) in Pakistan, Chen(2016) in Taiwan ,Harrison in Germany (2018) argued that reliability of the service provider, users trust will interdependent with each other.

H.PERCEIVED USABILITY AND CONVENIENCE TO USE

Perceived usability means a person belief that a specific system will enhance his or her job performance. Perceived convenience to use is defined as the level at which a user believes that less exercise is needed to use an appropriate system or technology .The studies conducted by Cham,Cheng, Seong, Khin, Bin in Malaysia (2018) , Chuang(2016) in Taiwan found that perceived usability is closely related with the users attitude towards the use of Finacial Technology products and services.

III.OBJECTIVES OF THE STUDY

- To study perceived opinion of the individual towards using technology in financial sector
- To analyse the relationship between various cognitive factors such as perceived expenditure, ease of time, perceived level of risk, frequent usage of automated tools, service quality, socio cultural factors, perceived trust, perceived usability, perceived convenience to use and users

motive to adopt the Financial Technology products and services.

IV. HYPOTHESIS OF THE STUDY

H1-There is a positive impact of perceived expenditure on users motive to adopt the Financial Technology

H2- There is a positive impact of perceived ease of time on users motive to adopt the Financial Technology

H3- There is a negative impact of perceived risk on users motive to adopt the Financial Technology

H4- There is a positive impact of perceived service quality on users motive to adopt the Financial Technology

H5- There is a positive impact of frequent usage of automated tools on users motive to adopt the Financial Technology

H6- There is a positive impact of socio cultural factors on users motive to adopt the Financial Technology

H7- There is a positive impact of perceived trust on users motive to adopt the Financial Technology

H8- There is a positive impact of perceived usability on users motive to adopt the Financial Technology

H9- - There is a positive impact of perceived convenience to use on users motive to adopt the Financial Technology

V. RESEARCH METHODOLOGY

A.RESEARCH DESIGN

The present study considers different customers who are utilising financial technology products and services. The study is based on sample survey method. The sample size is 100.The respondents are the customers of fintechnology products at Vijayawada. The data is collected using structured questionnaire on Likert's five point rating scale.

VI.RESEARCH MODEL

In this study the cognitive computational model used. Various cognitive factors such as perceived expenditure ease of time, perceived level of risk, service quality, frequent usage of automated tools, socio cultural factors, perceived trust, perceived usability, perceived convenience to use and users motive to adopt the fintechnology as shown in figure-2.

The figure-2 depicts the impact of different cognitive factors on users motive to adopt and use the Financial Technology products and services.

These factors are taken from technological acceptance model-1 and existing studies about fintechnology. The research model shows the influence of variaous cognitive factors on the adoption of fintechnoly products and services.

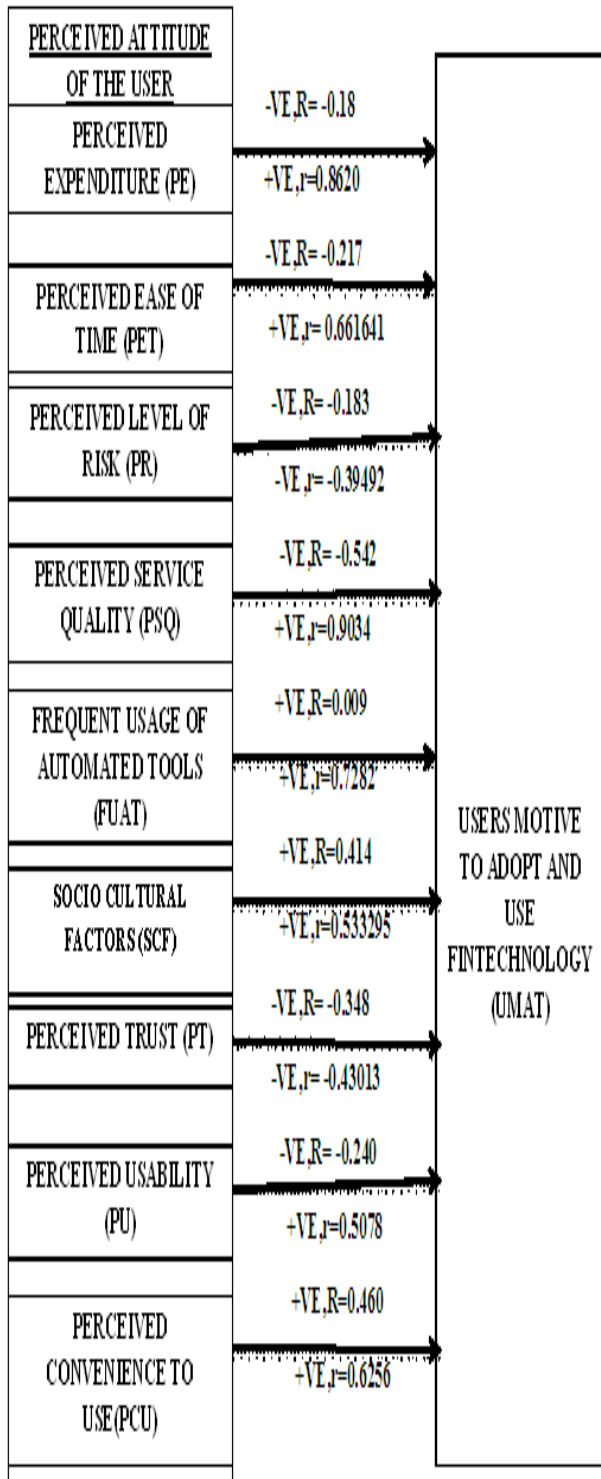FIGURE-2 –COGNITIVE COMPUTATIONAL MODEL

VII. DATA ANALYSIS

The respondents of this study are 56% male, 44% female. 24% are under graduates, 56% are graduates, and 20% are post graduates. As depicted in figure-2 the regression equation is $UMAT=5.331-0.18PE-0.217PET-0.183PR-0.542PSQ+\textbf{0.009FUAT}+\textbf{0.414SCF}-0.348PT-0.240PU+\textbf{0.460PCU.}$

VII.CONCLUSION

The regression model explaining that the variables such as frequently usage of automated tools, socio cultural factors, and perceived convenience to use are positively related with users motive to adopt and use the fintechnology. Other variables such as perceived expenditure, perceived ease of time, perceived risk, service quality, perceived trust, and perceived usability are negatively related with users interest to adopt and use fintech. This model explaining 37.4% of variance of users motive to adopt and use fintech.According to the correlation technique the variables such as perceived expenditure, ease of time, service quality, frequent usage of automated tools,socio cultural factors, perceived usability and convenience to use are positively influencing the users adoption of fintech and other factors such as perceived risk, perceived trust are negatively influencing users adoption of fintech.Rapid growth of fintechnology leads to achieve the financial inclusion.

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