ABSTRACT

Blockchain is a digitized distributed ledger technology in transaction services, aimed at reducing the cost and risk through innovative methods and applications. It has developed a new pathway and attracted business processes towards a very innovative approach of a business integrating technology for the Business Process Management System. Blockchain technology (BCT) a new approach so there has been little focus on the factors which are influencing individuals to use Blockchain-Based Applications (BBAs). To bridge the research gap, this study was conducted and the purpose of this study was to investigate the factors influencing adults' intention to use BCT and its applications. To achieve the aim of this study a proposed research model was developed based on previous studies on BBAs and test the proposed hypotheses. An online questionnaire was conducted to collect data. A convenience sampling technique used to survey 408 adults. For the demographic information of participants, descriptive statistics were used and to determine the relationship between external variables and behavior intention, Pearson correlation method was employed and conducted using SPSS. The proposed model was accepted and it can be used in future for scientific purposes. The results indicated that all hypotheses were accepted because all of them had a positive effect on adults' intention to use BBAs. This study will increase the knowledge of people on the factors that influence the use of BCT and its's usefulness.

Keywords: Blockchain technology; proposed research model; digitized distributed ledger; business process management; Blockchain-based applications

ÖZET

Blockchain, yenilikçi yöntemler ve uygulamalar ile maliyet ve riski azaltmayı amaçlayan işlem hizmetlerinde dijitalleştirilmiş dağıtılmış bir muhasebe teknolojisidir. Blockchain yeni bir yol geliştirmiştir ve İş Süreçleri Yönetimi Sistemi için iş bütünleştirme teknolojisine çok yenilikçi bir yaklaşım süreçlerini kendine çekmiştir. Blockchain teknolojisi (BCT) yeni bir yaklaşım olduğundan, bireylerin Blockchain Tabanlı Uygulamalar (BBAs) kullanmalarını etkileyen faktörlere odaklanmadı. Araştırma açığını kapatmak için bu çalışma yapıldı. Bu çalışmanın amacı, yetişkinlerin BCT ve uygulamalarını kullanma niyetini etkileyen faktörleri araştırmaktı. Bu çalışmanın amacına ulaşmak için, BBAs üzerindeki önceki çalışmalara dayanarak önerilen bir araştırma modeli geliştirildi ve önerilen hipotezler test edildi. Veri toplamak için çevrimiçi bir anket yapıldı. Katılımcıların demografik bilgileri için tanımlayıcı istatistikler kullanılmış ve dış değişkenler ile davranış niyeti arasındaki ilişkiyi belirlemek için SPSS kullanılarak Pearson korelasyon yöntemi kullanılmıştır. Önerilen model kabul edildi ve gelecekte bilimsel amaçlar için kullanılabilir. Sonuçlar, tüm hipotezlerin kabul edildiğini, çünkü hepsinin yetişkinlerin BBAs kullanma niyetini olumlu yönde etkilediğini gösterdi. Bu çalışma, insanlara BCT kullanımını ve faydalarını etkileyen faktörler hakkındaki bilgileri artıracaktır.

Anatar Kelimeler: Blockchain teknolojisi; önerilen araştırma modeli; sayısallaştırılmış dağıtılmış defter; İş Süreçleri Yönetimi; Blockchain tabanlı uygulamalar

ANILA KARIM

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I hereby declare that the work presented in the following thesis is my own effort and hard work except, where otherwise acknowledged and that the thesis is my own composition. No part of this thesis has been previously published or presented for any other degree or certificate.

Name, Last name: Anila Karim

Signature:

Date:

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To my beloved family...

ABSTRACT

Blockchain is a digitized distributed ledger technology in transaction services, aimed at reducing the cost and risk through innovative methods and applications. It has developed a new pathway and attracted business processes towards a very innovative approach of a business integrating technology for the Business Process Management System. Blockchain technology (BCT) a new approach so there has been little focus on the factors which are influencing individuals to use Blockchain-based applications (BBAs). To bridge this gap, this study was conducted and the purpose of this study was to investigate the factors influencing adults' intention to use BCT and its applications. An online questionnaire was

conducted to collect data. A convenience sampling technique used to survey 408 adults. TAM research model was used and all hypotheses were constructed based on previous studies on BBAs. For the demographic information of participants, descriptive statistics were used and to determine the relationship between external variables and behavior intention, Pearson correlation method was employed and conducted using SPSS. The results indicated that all hypotheses were accepted because all of them had a positive effect on adults' intention to use BCT and its applications. This study will increase the knowledge of people on the factors that influence the use of BCT and its's usefulness.

Keywords: BCT; Technology Acceptance Model; digitized distributed ledger; business process management; Blockchain-based applications

ÖZET

Blockchain, yenilikçi yöntemler ve uygulamalar ile maliyet ve riski azaltmayı amaçlayan bir dağıtılmış muhasebe teknolojisidir. BCT, yenilikçi yöntemlerle maliyeti ve riski azaltmayı amaçlamaktadır. Blockchain teknolojisi uygulamalarını kullanmak için bireyleri etkileyen faktörlere çok az odaklanıldı. Bu açığı kapatmak için bu çalışma yapıldı ve bu çalışmanın amacı yetişkinlerin Blockchain teknolojisini kullanma niyetini ve uygulamalarını etkileyen faktörleri araştırmaktır. Veri toplamak için çevrimiçi bir anket yapıldı. TAM araştırma modeli kullanılmış ve BBA'lar üzerinde yapılan önceki çalışmalara dayanarak tüm hipotezler oluşturulmuştur. Katılımcıların demografik bilgileri için tanımlayıcı istatistikler kullanılmış ve dış değişkenler ile davranış niyeti arasındaki ilişkiyi belirlemek için SPSS kullanılarak Pearson korelasyon yöntemi kullanılmıştır. Sonuçlar, tüm hipotezlerin kabul edildiğini, ve hepsinin yetişkinlerin Blockchain teknolojisini ve uygulamalarını kullanma niyetini olumlu yönde etkilediğini gösterdi. Bu çalışma, insanlara BCT kullanımını ve faydalarını etkileyen faktörler hakkındaki bilgileri artıracaktır.

Anatar Kelimeler: Blockchain teknolojisi; Teknoloji Kabul Modeli; sayısallaştırılmış dağıtılmış defter; İş Süreçleri Yönetimi; Blockchain tabanlı uygulamalar

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LIST OF ABBREVIATIONS

BCT: Blockchain technology
BBAs: Blockchain-Based Applications
BEN: Benefits of BCT
BPM: Business process Management system
IOS: iPhone Operating System
IT: Information Technology
MIT: Massachusetts Institute of Technology
NEU: Near East University
PEU: Perceived Ease of Use
ATT: User attitude toward using BCT
INT: Behavioral intention to use
PoS: stake proof algorithm
PoW: proof of work
PR: Perceived Risk and security
IBM: International Business Machines Corporation
SI: Social Influence
SOA: service-oriented Architecture
TAM: Technology Acceptance Model
PU: Perceived Usefulness
URD: User Requirement Document
WWW: World Wide Web

CHAPTER 1 INTRODUCTION

This chapter introduces the topic of study in brief and the researcher focuses on; the problem statement of this study, aim of study along with the proposed hypothesis, objective and importance of the study, also an overview of the remaining chapters of the study.

1.1 Overview

In the world of technology, there is wonderful growth in a few decades. The Internet has caused smart devices to proliferate globally. Such a technological revolution has changed business traditional acceptance. The major sources for such a resolution are the World Wide Web expansion and open-ended as facilities available for use, taking an example of ecommerce, which changed the concept of industries and led them to another level by offering facilities for the information exchange, commodities on a global level. Another great level of internet marketing enhancement is multitude finance technologies, cryptocurrencies also different user decentralized transactions through mobile payment (e.g. Android, IOS), which works to help to avoid unnecessary procedures experiencing in real life (Li et al., 2018).

For the first time, BCT was introduced to the world as a basic pillar to the cryptographic currency called Bitcoin. Because of the favorable qualities that BCT provided the fundamental principles of new technology have rapidly been extended to a broad range of new projects and the qualities are security and privacy, confidentially and guarantee and these attributes eliminate the need of third-party involvement. Blockchain is distributed ledger which contains information of the transactions and the events. The distributed system means that the ledger is kept on several computers, which can be compared with each other so that the ledger is distributed in several places simultaneously. To modify or add the data to the ledger it is important that more than 51% of the computers in the ledger should agree on adding new data. Thus, the information is often added to the Blockchain on a regular

basis, the cooperation of the computer does not allow to change any of the previous information on the blocks, as it would reduce the integrity of the data. Another factor needs to take care of is, the security of information so for this reason, the data is always encrypted to keep it private and secure for this purpose Secure Hash Algorithm 256 is used. A hash is an output of alphanumeric characters obtained from the input, a plain original text. These blocks will be time-sequenced and use the preceding block information, transaction value and a 3rd parameter to generate the next block header, typically as a hash output, to indicate the block's position. In the basis of the next block, the output of the blockhead is included to keep the blocks chained sequentially and to become a Blockchain in turn (Kogon, 2017).

According to Armstrong et al. (2019), Blockchain is an open source, chain of blocks which contains information, the security of these block is very difficult to break and the information once added to block hard to change. Each bock has three properties Data, Data inside a block depends on the type of, for example, Bitcoin blockchain contains information of a sender, receiver and the number of coins. A second important property is Hash which is like figure print as it is unique always. This hash cannot change for the same block with the same hash number. If hash number get changes it means this block property changed and it is no longer the same block. Last property of each block is the previous block's Hash. The security of a chain depends on this third element. this makes any chain secure. Blockchains has a process called proof of work, which slows down the creation of new blocks e.g. in bitcoins to add a new block to chain takes almost 10 minutes, because it re-calculates the proof of work for each block in the chain.

The fast-technological change has made it possible to create creative thoughts to make progress in how individuals work. The key idea of blockchain software is to decentralize and classify all transactions into distributed databases to eliminate the need for an intermediate or middle man or party. Blockchain is incorruptible digital business transaction directory programmable not only to document financial operations but practically all the benefits (Don and Alex, 2016).

Bitcoin cryptocurrency is a famous application of Blockchain and is most frequently connected with blockchain. It is forecast that 10 percent of world GDP will be collected using BCT by 2027 in order to emphasize the fast development in such systems (Pete, 2015).

Blockchain adoption is becoming such a common subject among scientists and the researcher. The use of Bitcoin brings several difficulties for the adoption of BCT. The focus of this study is on the cultural factors that may move the trust and authority from central entities to public-trusted ledgers, as Blockchain suggests. In specific, this research investigates the point of views of adolescents on the following factors: perceived ease of use (PEU), perceived risk (PR) and social influence (SI) as well as the benefits of BCT. In addition, the feasible impact on the desire to adopt BCT from these variables is studied.

1.2 Problem Statement

Technological drivers can be personal, cultural and organizational variables, among other things. This corresponds to earlier research of adaptive technique Yousafzai et al., (2007). In the era of illumination, technology plays a crucial part, the technological revolution of Blockchain is one aspect (Buitenhek, 2016). So this study seeks to understand the factors influencing adults intention to use BBAs by assessing the awareness among potential adults also evaluating factors from Technology Acceptance Model (TAM) variables by various researchers i.e. Perceived Usefulness (PU) Nysveen et al. (2005), Attitude, Taylor et al. (1995) Perceived Ease of Use (PEU), Davis (1989) Perceived Risk (PRS) Featherman and Pavlou (2002) and Intention to Use (IU) and Social influence (SI) Hsu et al., (2008). Along with these variables, the author added Benefits as the 7th variable to TAM.

1.3 Aim of the Study

The aim of this study is to identify the factors influencing adults' intention to use BBAs.

To achieve the aim of this study, followed suit some proposed hypotheses:

H1: A Perceived Ease of Use has a positive effect on Perceived Usefulness of BBAs
H2: A Perceived Usefulness has a positive effect on adults Attitudes towards using BBAs.

H3: A Perceived Ease of Use has a Positive effect on adults Attitudes towards using BBAs.
H4: A Perceived Ease of Use has a positive effect on Behavioral Intention to use BBAs.
H5: Perceived Risk has a positive effect on adults Attitudes towards using BBAs.
H6: Perceived Risk has a positive effect on Behavioral Intention to use BBAs.
H7: A Social Influence has a positive effect on Perceived Usefulness of BBAs.
H8: A Social Influence has a positive effect on adults Attitudes towards using BBAs.
H9: A Perceived Usefulness has a Positive effect on Behavioral Intention to use BBAs.
H10: A Social Influence has a positive effect on Behavioral Intention to use BBAs.
H11: Benefits of BBAs has a positive effect on Behavioral Intention to use BBAs.
H12: Adults attitudes have a positive effect on Behavioral Intention to use BBAs.

1.4 Importance of the Study

The potential implementations of BCT have proven to be among the most popular technologies in many areas. As it is new technology and there is a lack of awareness of BBAs and its uses. This study aims the factors influencing adults' intention to use BBAs, for this purpose an online questionnaire has been conducted and few examinations have inspected on BBAs from the setting of use by more established grown-ups.

There are a few series of researches by various researchers in different areas aiming to discover the factors influencing individuals and company's adoption of BCT. Most researchers adopted the Technology Acceptance Model (TAM) by Davis 1989 but this research makes use of a hybrid model developed by the researcher. Researchers with interest in this topic will find the results of this study beneficial specifically for those who have concerns related to the use of BBAs. Another benefit of this study is to fulfill the research gap in BCT so this study is a contribution towards BCT research and it focuses on the elements affecting the probability that grown-ups will use Blockchain systems worldwide.
And the result will be concluded based on adults' responses collected through an online questionnaire .

1.5 Limitations of the Study

The researcher stated the limitations of this study as below:

- Due to the time concern and length of the questionnaire, there were limited questions.
- The questionnaire was conducted only in English, although the targeted countries do speak different languages and may be any of participant don't understand English well, and maybe misunderstood the topic Blockchain or digital currency as just epayment, although it has many more applications.
- Another fact that the data collection time was very limited, although the targeted responses were collected it was much better if there were more responses.

1.6 Overview of the Thesis

The section of the overview provides guidance on a brief description of other chapters included in this study.

***Chapter 1*:** It is the introductory part of the thesis and explains the problem definition, importance of the study, aim of the study.

Chapter 2: This chapter focuses on findings such as the research approaches adopted and the technical frameworks adapted by various researcher. It will explain briefly the research done so far in support of this study on BCT.

Chapter 3: It explains the theoretical framework of BCT. How BCT is been using and what are its advantages and disadvantages of Blockchain applications. A brief explanation of the Technology Acceptance Model Davis (1989) and the modified TAM by the researcher.

Chapter 4: This section is based on this study's methodology. The researcher will explain the research model, participants, sample selection, data collection tools, data analysis, reliability test used on questionnaire tools and the research procedure.

Chapter 5: This chapter show the evaluating results of the conducted questionnaire. Justifying the proposed hypothesis

Chapter 6: The last chapter, it draws the conclusion for future researchers in terms of key findings, limitations, and recommendations. Evaluation of observations acquired in adult viewpoints on the use of BCT, showing the impact of this study on future work along with limitations.

CHAPTER 2 RELATED RESEARCH

The literature review, based on the existing status of research, provide Blockchain's technological background and thus the basis for this paper. The purpose of this chapter is to provide the reader with a brief introduction of BCT, its significant impact and the applications of BCT.

2.1 Adoption of BCT

Baur et al. (2015) conducted a study on the adoption of cryptocurrencies. They adopted the exploratory interview method and interviews 13 individuals. The aim of their study was to investigate the factors influencing individuals' intention to use cryptocurrencies especially Bitcoin. They found that most of the stakeholders considered perceived ease of use relatively low and perceived usefulness differ from individual to individual.

Woodside et al. (2017) conducted research on BCT adoption and they aimed to review the acceptance of BCT and the future use of BCT. They used the triangulation method in which they combined different methodologies e.g. quantitative and qualitative techniques as a major part of the research model. They found that there are various factors which influencing people to use BCT or adapt it such as perceived risk, perceived ease of use, usability, and awareness.

Kamble et al. (2018) conducted a study on the adoption of BCT. The aim of their study was to find out the perceived ease of use affect the behavioral intention of individuals. For their study, they surveyed 181 individuals and they used descriptive statistics to analyze the collected data. They found that PEU and attitude influence the intention to use BCT.

Alaklabi and Kang (2018) examined the factors that influence the adoption of BCT. The aim of the study of their study was to examine the factors which promote BCT as well as the challenges of BCT adoption. They found that the intention to adopt BCT is associated with perceived risks and security.

Sumerta and Wardana (2018) conducted a study of intention to use electronic money. The purpose of their study was to identify the factors which affect perceived usefulness and consumers use of digital money. They used nonpurposive sampling technique. 108 took part in this research. The data analysis tool used was Wrap PLS 3.0. They found that perceived usefulness and perceived ease of use has a positive effect on the intention to use digital money. The attitude of the individual also has a positive effect on the intention to use digital money. They recommended companies who used or work in electronic money should improve more and more so that the intention to use electronic money will be increased and every company and individual will benefit out of it.

Sifaleras and Petridis (2019) carried out research on the adoption of digital currencies in organizations. The aim of their study was to examine the use of digital currency by different organizations and freelancers. 254 companies and freelancers were surveyed for their study. To analyze the collected data, they used descriptive statistics technique. They found that large companies and freelancers make use of digital currencies.

2.2 Blockchain-based Applications (BBAs)

Folkinshteyn and Lennon (2016) conducted a study aimed was to analyze the aspects of the technology acceptance process for currency Bitcoin and blockchain as financial technology in both developer and the user perspective so that they could categorize how shareholders are acceptance Bitcoin and BCT. For this reason, they had studied the previous studies and find out the similarities and differences of the shareholders. To carried out their study they used secondary data.

Chakraborty and Mitra (2018). conducted research on the adoption of digital wallets in India. The aim of their study was to figure out whether an individual's demographics influence the intention to adopt e-wallets. They used regression model for their study and it showed a remarkable number of variances to adopt intention e-wallets with R2 = 81.7%.

Saberi et al. (2019). carried out research on BCT adoption barriers. The aim of their study was to examine the BCT and smart contracts with supply chain applications. They found major four barriers for adoption of BCT which were categorized as technical, interorganizational, intra- organizational and external barriers. Further, they mentioned that the BCT is still in progressing and the barriers in the adoption of BCT will be overcome with the passage of time.

Hawlitschek et al. (2018). conducted a systematical analysis on BCT in education. They performed a qualitative analysis of website providers to analyze the properties of the technologies. The came to know that the current BCT based educational applications proposals vital benefits for education. Most of the applications of BCT for education are aimed for the general public and the job hunters.

Strobel et al. (2018) conducted a study on security concerns in swarm robotics via BCT. The aim of their study was to investigate the security risks and concerns in a swarm and Byzantine robots and they came to summarized that there are vibrant benefits of Blockchain method when Byzantine robots are part of the swarm.

Banerjee et al. (2018). conducted a study on the adoption of Bitcoin in Malaysia and aim was to investigate the factors influencing intention to use Bitcoin currency. 175 individuals were surveyed and about 50.86% were using Bitcoin. They have used descriptive statistics to analyze the collected data. They found that behavioral intention to use Bitcoin in Malaysia was affected by hedonic motivation, price value, performance and trust.

In order to handle and exchange private health information, Chen et al. (2018) suggested an embedded blockchain and cloud data storage system. The suggested system can be utilized to securely stored and exchange private medical information for patients. The proposed strategy is uniquely since it provides clients with full access to and commands over their private hospital information without any third party's participation.

Fein and Reijntjes (2018) conducted a study on BBAs. The aim of their study was to figure out the rising BBAs and their impact on the economy of a country. They used the cross-case

analysis technique to build data on the interviews they conducted for individuals as well as institutes to information. They concluded the study on the bases of the interviews they have taken which stated that BBAs reduce organizational barriers and mitigate risks in the emerging economy of the country because it gives a substitute pathway then the traditional financial setup which boosts up the investments especially foreign, it also inspires new participants, and creates a diversity of new opportunities for local people.

In order to promote safe and secure use of medical devices as well as the safety hazards connected with more patient control scheme, Griggs et al. (2018) presented a private blockchain using the Ethereum protocol, which eliminated the risk. The blockchain-based approach allows professionals to monitor the health status of their clients from remote sites and to retain a secure, and up-to-date record. Their approach can also help achieve actual remote surveillance.

2.3 Technology Acceptance Model for BCT-based Application

Another study by Jin et al. (2018) on cryptocurrencies. The aim of their study was to investigate the factors influencing, intention to use cryptocurrencies. They have used UTAUT as a research model for their study and they compared three countries China, Vietnam, and Korea. They found that that social influence, perceived risks have navigated effect on the use of cryptocurrencies.

Francisco and Swanson (2018) conducted a study on BCT adoption for supply chain and the aim of the study to figure out the problems coming in way of adopting BCT in the supply chain. They used the Unified Theory of Acceptance and Use of Technology (UTAUT) as a research model. They came to know about behavioral theory to understand the BCT adoption in supply chain and the implementation of BCT applications is quite in demand and it will defiantly benefit in upcoming years.

Tveita and Borander (2018) conducted a study on BCT adoption in Norwegian corporations. The aim of this study was to develop a theoretical model so that can explain the intentions of corporations to adopt BCT. They used the technology adoption model to examine the

factors which influencing corporations to adopt BCT. 102 corporations were surveyed for their study. They found that 45.7% of the variance in the intention in BCT adoption.

Roussou and Stiakakis (2019) conducted a study on digital currency adoption by companies. The aim of their study was to provide academic research about the actual use of digital currency. They have used Diffusion of Innovations Theory and the TAM for their study and 245 organizations were surveyed. The survey aim was to figure out the actual use of digital money in terms of the transaction by the companies. The outcome of their study was that many companies such as banks, financial organizations, scientists and policymakers do use digital money for actual use.

Anjelina, (2018) conducted a study on the use of e-money. The purpose of the study was to examine the factors that influence individuals to use e-money another goal of the study was to investigate whether gender effects use of e-money. She has used TAM as a research model and 186 individuals were surveyed. She found that perceived ease of use, perceived usefulness, compatibility, perceived cost, perceived risk, and perceived risks were not the factors that identify an individual to use or adopt e-money in Indonesia. However subjective norm, social influence, and perceived benefits were important factors that influence individuals to adopt e-money.

2.4 Summary of Related Research

Following tables show the summary of the related research which the researcher found the most relevant to the topic. As the study topic is quite new so the researcher tried to find the most relevant literature reviews done by other researcher and used to justify this study.

As BCT is a new technology and there is a big gap in the research and development of this technology and these studies didn't specifically examine the factors that influence adults' intention to use BBAs. Also, the research does not focus on the adults, age groups and profession of the adults but they analyzed results generically This study has been conducted to bridge this research gap.

Table 2.1: Summary of related research

Author	Research Type	Demography	BCT Evaluation
Baur et al. (2015)	Quantitative	Companies	Use of cryptocurrencies
Woodside et al. (2017)	Quantitative	Individuals	Adoption of BCT
Folkinshteyn and Lennon (2016) (2017)	Qualitative	Future Researcher	Acceptance of Bitcoin and BCT as finance technology
Chakraborty and Mitra (2018)	Quantitative	Individuals	Intention to use e-wallets
Sachin et al. (2018)	Quantitative	Individuals	Behavioral Intention to use BCT
Alaklabi and Kang (2018)	Quantitative	Individuals	Adoption of BCT
Sumerta and Wardna (2018)	Quantitative	Organization	Intention to use e-money
Sara et al. (2018)	Qualitative	Organization	Intention to use BCT in Supply chain
Levy et al. (2018)	Qualitative	Institution	BBAs for education
Strobel et al. (2018)	Qualitative	Companies	Swarm Robotics via BCT
Lee et al. (2018)	Quantitative	Individuals	Adoption of Bitcoin
Chen et al. (2018)	Qualitative	Companies	BCT for medical purposes
Kristoffer and David (2018)	Quantitative	Organizations	Adoption of BCT
Tveita and Borander (2018)	Quantitative	Individuals	Intention to use BCT
Roussou and Stiakakis (2018)	Quantitative	Individuals	Adoption of Digital currency

Anjelina (2018)	Quantitative	Individuals	Use of e-money.
Sifaleras and Petridis (2019)	Quantitative	Companies and Freelancers	Adoption of digital currencies

CHPATER 3 THEORETICAL FRAMEWORK

This chapter starts by giving an overview of the use of BCT, it further goes to explain the factors influencing adult's intention to use BBAs.

3.1 Blockchain Technology

Cryptographers Haber and Stornetta (1991) put forward the idea of a Blockchain for the very first time in the Journal of Cryptology and the paper was "How to time stamp a Digital Document". They integrated the design of Merkle trees, enabling the collection of multiple documents in one block to enhance its efficiency (Permitted, 2019). But due to the very early stage of the internet, they couldn't go further with their idea. However, this thought was revitalized by Satoshi Nakamoto (2008) in the paper on a peer-to-peer system for digital cash called bitcoin. In 2016 a distributed ledger system, where a network node verifies all transactions and it leads to Blockchain 2.0 (Antonopoulos, 2016).

Blockchain can be described as a database shared with the users and enable them to transact important assets in a public and pseudonymous setup with no external or central authority. (Risius and Spohrer, 2017). Blockchain is a decentralized distributed ledger technology that produces, validates and records encrypted digital asset transactions incorruptibly. BCT is the algorithms and computer infrastructure for creating, inserting and using stored information blocks (Zhao et al., 2016). BCT is a distributed database of records or shared public/private records of all digital activities performed and shared by participating agents in Blockchain (Crosby et al., 2016).

A key difference in both the Internet's existing design and BCT is that the Internet has been meant to move information not values and copies of things, not original information. In Blockchains, value is described in transactions recorded in a shared ledger and secured through the provision of a testable, time-stamped transaction record that provides reliable and auditable information (English et al., 2016). However, BCT is not restricted to currency, as each transaction in the ledger is just a string value, it is always possible to trace transactions. The Blockchain is basically a linked chain of data blocks the Blockchain is basically a linked chain of data blocks (Pierro, 2017).

A transaction is created in Blockchain when any digital entity is assigned. A block has been produced by multiple transactions and hash code protects it. By sorting or hashing the transactions with the subsequent blocks and adding them together, the transaction input becomes unchangeable. (Siba et al., 2017).

3.2. How Blockchain Works?

Before going into the BCT details, let's explain the basics of Blockchain i.e. how Blockchain shape? Suppose there are three users, each with transaction blocks, and each block contains some important values such as public and private keys, owner signature, and hash. There are serval steps that take place when blocks are connected. First, the first block's public key is verified with the owner's signature of the second block. Likewise, the first block's private key is signed with the second block owner's signature. Hashes of both blocks are linked and create a dependence and this process continues and continues and creates a chain called Blockchain.

A standard Blockchain consists of blocks of data containing the transaction records connected by sequential hash numbers, thus determining a dependence on the content of preceding blocks and a random number of current blocks should also exist. And that all depends on the update time of the network. Suppose every five minutes a network is updated automatically. Each participant must be synchronized with the ledger copy. Let's assume, a person tries to executed or retrieved any unauthorized information in one of the blocks, the

network will reject the changes made in the block by comparing with the other copies and replace with a copy of consensus approved information. The following figure briefly explains a transaction cycle (Aste, et al., 2017).

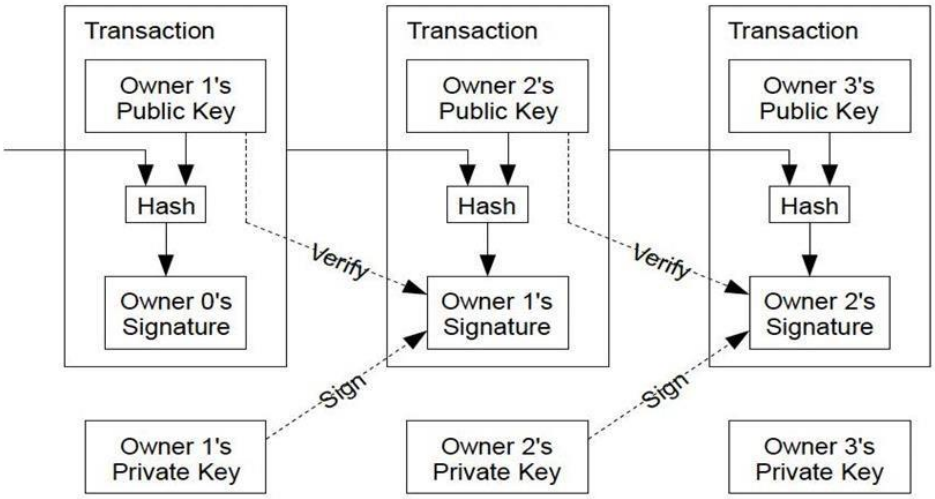


Figure 3.1: A technological design of Blockchain. Retrieved 12 June, 2019 from https://bitcoin.stackexchange.com/questions/10279/explainations-about-chaining-oftransactions

The main Blockchain workflows are as follows:

1. New data and network broadcast are recorded in the sending node.
2. The notification from the data received is verified by the recipient node and stored in a block if it is accurate.
3. In this step, the proof of work (PoW) or stake proof (PoS) algorithm is executed in the network by every receiving node.
4. Each node in the network acknowledges the new block by executing a consensus algorithm and expands the chain continuously. these steps repeat every time when a new block added up (Lin et al., 2017).

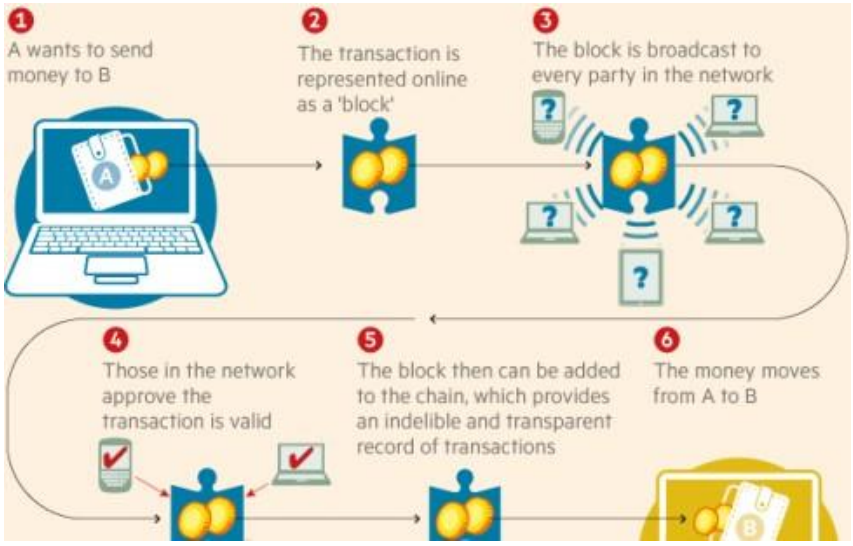


Figure 3.2: Blockchain transaction cycle. Retrieved 12 June, 2019 from http://techweet.com/transaction-made-blockchain.html

3.3 Types of Blockchain

There are three different Blockchain types available which are explained in the following sections:

3.3.1 Public Blockchain

In public Blockchain there is no any restriction, everyone can read, write or modify the transactions and anyone can be authenticator of transactions and normally in such type of Blockchain network authenticator takes care of transactions. In such type of Blockchains, no one can control the network and information cannot be modified once it is validated on the Blockchain. The most popular public Blockchain are Bitcoin and Ethereum. Below figure shows the example of public Blockchain.

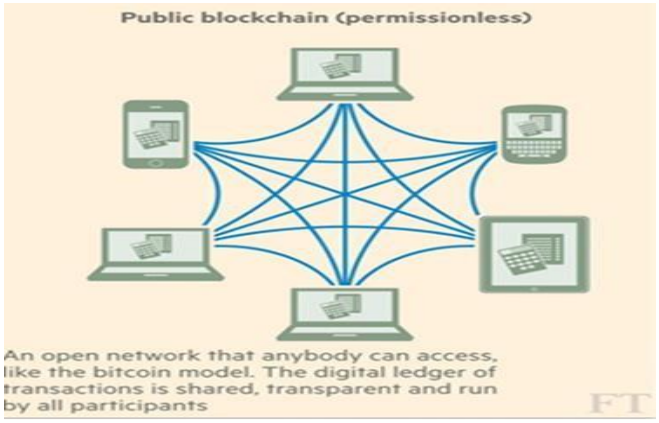


Figure 3.3: Public Blockchain. Retrieved 12 June, 2019 from https://busy.org/@keycom/how-true-is-it-that-bitcoin-s-open-public-ledger-is-itsbiggest-flaw

3.3.2 Private Blockchain

As the name shows that in this type of Blockchains not every node is permitted to take part in the transactions and it has authority management which manages the information access in the blocks. To be part of private Blockchain one needs to request to the authority and after proper investigation of information, a person will be allowed or not. Below figure shows the structure of private Blockchain.

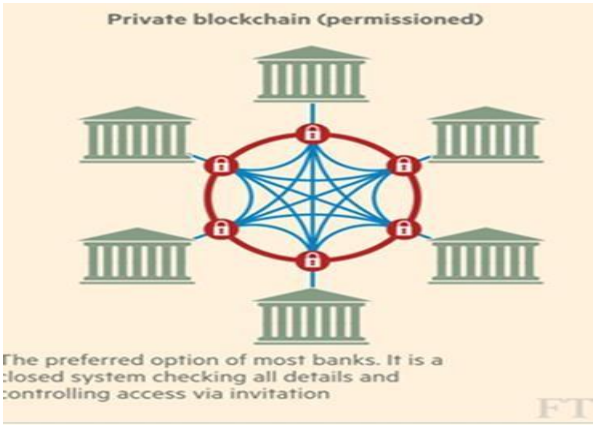


Figure 3.4: Private Blockchain. Retrieved 12 June, 2019 from https://busy.org/@keycom/how-true-is-it-that-bitcoin-s-open-public-ledger-is-its-biggest-flaw

3.3.3 Consortium Blockchain

In this type of Blockchain the node with authority may be selected in advance, typically has alliances such as the industry to industry, Blockchain data may be public and private. the examples of consortium Blockchain are R3CEV and Hyperledger (Permitted, 2019). Following figure shows an example of consortium Blockchain.

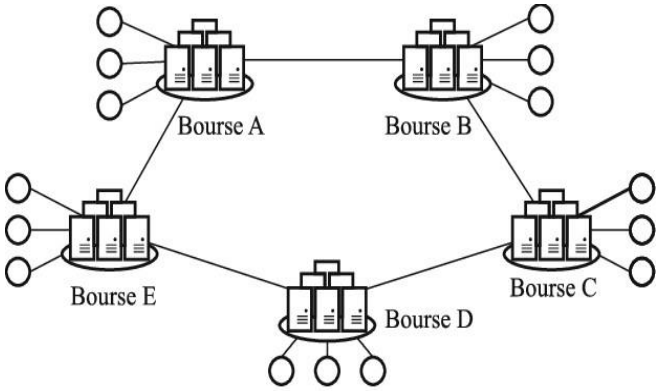


Figure 3.5: Consortium Blockchain. Retrieved 12 June, 2019 from http://techweet.com/transaction-made-blockchain.html

3.4 Applications of Blockchain

Although Blockchain is new technology but it has numerous applications which are explained in upcoming sections.

Bitcoin is completely open source, Bitcoin protocol which establishes the rule to which every person should agree if they want to use bitcoin. Which includes so many things example the length of block and so on. Bitcoin is consisting of two big fragments bitcoin protocol and Blockchain, which keep the record of all the transaction ever happened. Fork bitcoin when the user disagrees to any protocol or any rule of bitcoin and the can proceed with their own fork which requires bitcoin protocol code plus their changes to that protocol. Once they done with their code the specify a block number to be published at this time their fork will be live, at this stage the community divided into two groups i.e. Original Bitcoin supporters and forked bitcoins supporters. Now each group starts adding new blocks to their forked. The

forked Blockchain is based on original block chain so each transaction happed on original block chain also happened on forked. This mean the amount of coin you had before on original Blockchain you will get same amount on forked as well. This amount is called free money but it all depends on whether forked attack value or not (Sanjeev, 2017).

In 1994, Szabo introduced the idea of smart contracts for the first time. After a big achievement in Bitcoin, now it was time to execute various apps of BCT other than cryptocurrencies and here smart contracts were introduced by Blockchain 2.0 and Ethereum is the best example of public Blockchain which promotes smart contracts for Turing. As name suggests that smart contract is a contract among the shareholders and there are particular set of rules or requirements to provide commands to a computer in order to execute the application automatically. In order to create/execute smart contracts on existing Blockchains, BCT has provided facility buy adding application layer to the existing Blockchains. In this way smart contracts turn out to be more reasonable (Meng et al., 2018).

According to Prisco (2017) The possible hand-signed contracts are gradually being adapting to done through digital codes, such as property leases seem to have a down payment that, depending on the condition of the property at end of the lease, may be payable in whole, in part or in any other form. New initiatives proceed to discover methods of coding those challenges in the smart contract to attain the highest possible amount of digital implementation without being dependent on one party. since 2014, the Ethereum project introduced and experienced huge development despite being just a few years old, to the extent of being the biggest application of Blockchain and the second biggest industry capitalization crypto entity.

How Blockchain features are still available to analysis and growth within the supply chain. In contrast to Bitcoin and other publicly available economic Blockchain apps, Blockchainbased supply chain connections could need a locked, personal, authorized Blockchain with many restricted competitors. Determination of privacy level is one of the first choices though doors may still be open for a more public set of relationships.

According to Chen et al. (2018) Some of the universities and schools have effectively used BCT as university of Nicosia was the first educational institute that used BCT to manage students' certificates of achievement through MOOC platforms. Sony global education used BCT for developing assessment platform to be used globally to manage and keep record of student's achievements and degree information. Later, the School of Massachusetts Institute of Technology (MIT) in collaboration with Learning Machine Company designed and developed digital online learning platform based on BCT. Its aim was that students who attended projects of MIT lab and were able to pass their assessment will receive certificate that will be part of record in the Block-chain technology network formed for educational purposes (Skiba, 2017); (Bartling, 2019).

The entire transcripts can be formulated by Blockchain technique for both formal and informal education systems. It is not restricted to transcripts but also learning materials, results, certificates, research experience and many more. All this information can securely be saved in a suitable manner and can be retrieved from Blockchain framework. The distributed Blockchain directory is unchanging and reliable. it helps reduce fraud to a certain extent. Many instances of graduate fraud have existed in the past. However, the use of Blockchain to grant and manage the student degree can now be prevented. The data complemented with the User ID are checked and validated by miners all over the world and stored in a Blockchain. Reliability and competence are therefore guaranteed, which reduces the degree of fraud considerably. BCT can promote student efficiency in learning by knowing "teaching is gaining." It can keep a full, reliable record of instructional operations, including official and casual teaching procedures and outcomes. It can also document the learning comportment and achievement of professors and therefore provide a guide for the assessment of learning. BCT has excellent prospective apps for educational layout, behavioral monitoring, and analysis as well as formative assessment both for students and professors.

3.5 Advantages of Blockchain Technology The

major benefits of BCT are as below:

- Block-chain system is that it provides decentralization of maintaining of data and information only one node and few people do not have the authority to manage the data so this ensures integrity of data information.
- Persistency of Transaction data information. Networked nodes pass on information ensuring transparency and immutability of data.
- Validity of data ensured by nodes.
- Anonymity and identity of participant is ensured in public chain but it is required to be revealed in closed private and permissioned block-chains.
- Auditability is also effectively ensured openly of data by public block-chain systems.
- Closed and openness of block-chain system is that in public-block-chains being open anyone can publish transaction and join system.

Block-chained systems are gaining place and attracting governments perusing amplified trust of citizens through this. Keeping advances of technology in to consideration implantation of BCT pilot application in government sector. This study gives comprehensive insight of implementation and benefits of BCT at government level majorly I context of European countries. Government level use of ICT's and Blocked-chain technology has played effective role in development of evidence-based decisions and policy making for better development of country. BCT works at a realm beyond than an enabler of cryptocurrencies. This includes development of records of transactions and validates recorder data sequenced in chronological order through decentralized network of peers. Which ensure safety of data and there is no need of third party to investigate these records for validation. BCT is capable of validating and keeping a permanent public record of transactions without involving third party by facilitating P2P peer to peer transaction channel. BCT is also helpful in providing variety of services effectively at government level like smart contracts, public services, security of government data and can effectively

promote society and businesses to be innovative and prosper through networking of P2P relationship (Gaetani et al., 2017).

BCT being a digitized distributive ledger technology can be helpful in enhancement of public sector as a vigilant, open and trusted chunk of country to bring developmental change in economy and public services, through development of networking and collaboration amongst the citizens, enterprises, industries and government sectors to work together for effective development. BCT application at government level will enable the government to address the issues and needs of the society, public sector and business processes effectively preventing any kind of fraud establishing trust among different stakeholders and sectors of country (Viriyaitavat and Hoonspon, 2019).

3.6 Technology Acceptance Model (TAM)

In 1989 D. Davis proposed a model known as Technology Acceptance Model (TAM) with background knowledge of Theory of Reasoned Action (Fishbein and Ajzen, 1975). The aim of this model was to predict the acceptance of technology by the users, how humans are utilizing informational systems on industrial level. This model was validated in 2000 by Davis and Venkatesh by empirical tests and found about 40% of the variance in intention and actual use, which they had explained. Along with the “the theory of Planned Behavior” by Ajzen in 1991 and “theory of Reasoned Action by Fishbein and Ajzen” in 1975, Davis has added two more variables to TAM which were Perceived ease of use and perceived usefulness are the most important factors of TAM (Tveita and Borander, 2018).

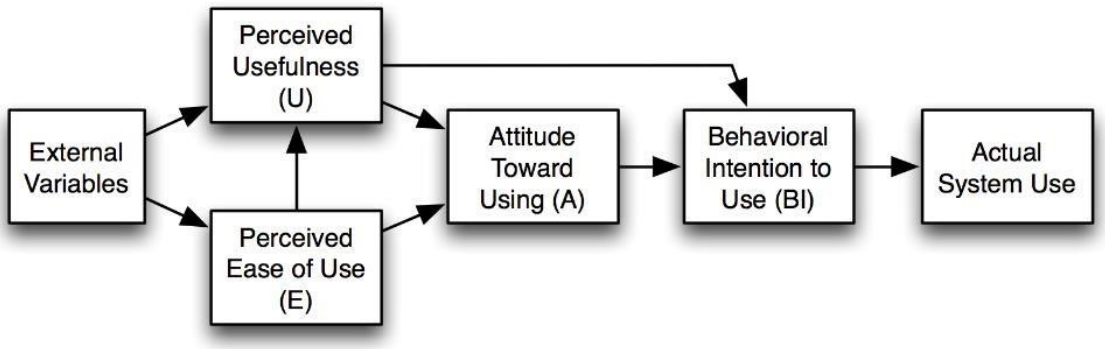


Figure 3.6 Technology Acceptance Model (Davis, 1989)

According to Jogiyanto, (2009) PEU is, to what extent an individual think that it would be effortless to use a technology. Another research says that ease of use has many dimensions such as, ease to use, ease to learn, ease to understand and become a skillful person. (Sun and Zhang 2011). The degree or extent to which the user expects the system to be free of effort (Davis,1989). These include other factors which may contribute to users' acceptance of informational systems. Such as cultural, social and political factors. It measures how likely a person is to deploy and uses the system. This study is conducted to figure out the user's intentions to use BCT. This refers to the attitude of person towards the use of system. In another words; it refers to perspective of the user and users' evaluation of the desirability of using particular system.

The perceived usefulness is defined as the subjective opinion that technology can improve job efficiency and performance which indirectly impacts the user's adoption of technology. Human beings tend to use or not to use the application to the point that it will assist them to do their work better. The first variable is called Perceived usefulness (Jin et al., 2019). The perceived usefulness can ultimately be described as "The degree to which a person believes that using a particular system would be free of effort" Davis, (1989). In 2008, Wiyono defines Perceived usefulness (PU) as measure the user's ability to use technology that can deliver advantages to the workplace. Another well-known researcher Ilham said that Perception of usefulness is thought to be beneficial if the individual utilizes the technology.

Because usefulness is related with attitude of person who uses the technology (Ilham, 2017).

CHAPTER 4 RESEARCH METHODOLOGY

This chapter discloses the research model that is used for this study, information of the participants, the data collection tools used, data analysis methods and the procedure followed by researcher to conduct the study.

4.1 Research Model

A research model with seven dimensions i.e. Perceived Usefulness, Perceived Ease of Use, Perceived Risk, benefits, Attitude, Social Influence and intention to use, was used to test the relationship between dependent and independent variables. An online questionnaire was conducted to collect the data.

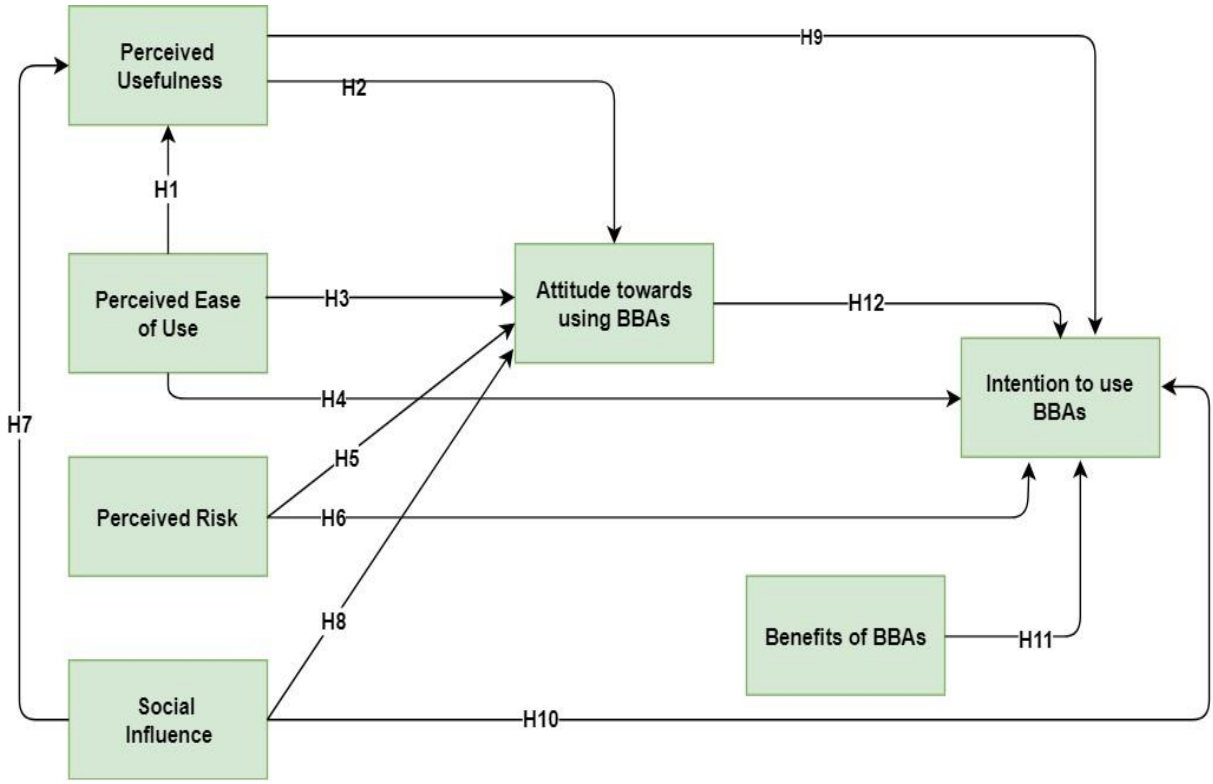


Figure 4.1: Research model of the study

4.2 Research Hypothesis

The research hypotheses are discussed in brief as follow:

H1: *A Perceived Ease of Use has a positive effect on Perceived Usefulness of BBAs*

The first hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Sifaleras and Petridis (2019) examined behavioral intention to use BCT, they found that PEU had affect relation with PU. that perceived ease of use affects the Perceived to usefulness of BCT. This hypothesis is stated to confirm the assertion that PEU affects the PU of BCT.

H2: *A Perceived Usefulness has a positive effect on adults Attitudes towards using BBAs.*

The second hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Saad and Kyeong (2018) examined Adoption of BST among individuals and found that PU had affect correlation with individuals' attitude towards using BCT. This hypothesis is stated to confirm the assertion that adult PU affects the individuals' attitude towards using BBA.

H3: *A Perceived Ease of Use has a Positive effect on adults Attitudes towards using BBAs.*

The third hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Levy et al. (2018) examined cryptocurrencies among adults and found that cryptocurrencies are widely used by adults from the developing nations. This hypothesis is stated to confirm the assertion that PEU positive effect on adults' attitudes towards using BBAs.

H4: *A Perceived Ease of Use has a positive effect on Behavioral Intention to use BBAs.*

The fourth hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Sifaleras and Petridis (2019) examined behavioral intention to use BCT, they found that PEU had effect relation with behavioral intention to use BCT. This hypothesis is stated to confirm the assertion that PEU affects adults' behavioral intention to use BCT.

H5: *Perceived Risk has a positive effect on adults Attitudes towards using BBAs.*

The fourth hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make

use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Sifaleras and Petridis (2019) examined behavioral intention to use BCT, they found that PEU had affect relation with behavioral intention to use BCT. This hypothesis is stated to confirm the assertion that PR affects adults' attitude towards use of BBAs.

H6: *Perceived Risk has a positive effect on Behavioral Intention to use BBAs.*

The first hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Roussou and Stiakakis (2018) examined adoption of digital money and found that PR had affect behavioral intention to use digital money. This hypothesis is stated to confirm the assertion that PR affects adults' behavioral intention to use BBAs.

H7: *A Social Influence has a positive effect on Perceived Usefulness of BBAs.*

The first hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Satadruti and Mitra (2017) examined e-wallets and found that SI had affect PU to use digital money. This hypothesis is stated to confirm the assertion that SI affects PU to use digital money.

H8: *A Social Influence has a positive effect on adults Attitudes towards using BBAs.*

The first hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Jin et al. (2018) examined intention to use cryptocurrencies and found that cryptocurrencies are widely used and SI affect attitude towards using

cryptocurrencies. This hypothesis is stated to confirm the assertion that SI affects adults' attitude towards using BBAs.

H9: *A Perceived Usefulness has a Positive effect on Behavioral Intention to use BBAs*

The second hypothesis is to examine the relationship among perceived usefulness and behavior intention. Perceived usefulness is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Anjelina (2018) examined use of emoney and found that e-money are widely used and PU affect behavioral intention to use it. This hypothesis is stated to confirm the assertion that PU affects adults' intention to use BBAs.

H10: *A Social Influence has a positive effect on Behavioral Intention to use BBAs.*

The first hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Joseph et al. (2017) adoption of BCT and found that SI affect behavioral intention to use it. This hypothesis is stated to confirm the assertion that SI affects adults' intention to use BBAs.

H11: *Benefits of BBAs has a positive effect on Behavioral Intention to use BBAs.*

The first hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Joseph et al. (2017) adoption of BCT and found that benefits affect behavioral intention to use it. This hypothesis is stated to confirm the assertion that benefits of BBAs affects intention to use BBAs.

H12: *Adults attitudes have a positive effect on Behavioral Intention to use BBAs.*

The first hypothesis is to examine the relationship among attitude and behavior intention. Adult attitude is of the factors believed to influence the behavior intention of adults to make use of BCT. Limited studies have been conducted to examine the factors that promote BCT among adults. A study by Sachin et al. (2018). examined the adoption of BCT found that attitude affects the intention to use BCT. This hypothesis is stated to confirm the assertion that adult attitude affects the behavior intention to use BCT.

4.3 Research Participants

The research was conducted in Northern Cyprus, the aim of study to investigate the factors that influencing adults' intention to use BBAs. The random sampling technique is used to select the participants of any nationality living in Northern Cyprus during this study period and they took part in filling questionnaire by their own choice. The participants were adults from 18-50.

4.3.1 Demographic information of participants

As in the demographic section of questionnaire participants were asked total of five questions which are discussed as below:

The researcher conducted the questionnaire to collect the required data and able to reached over 500 participants from different nationalities living in Northern Cyprus and data was collected in two weeks from 2nd May to 15th May 2019 and able to collect 408 responses in total. The total 259 around 63.5% males and 149 around 36.5% females took part in this study.

For age scale researcher followed MoLead (2013) which has five groups under 20, in this group of age 48 number of participants had taken part which is 11.8%. second group is 2130 years old and 213 number of participants took part and the percentage is 52.2% which is the highest age group participating in this questionnaire. The second highest group participating in this questionnaire is 31-40 age group had 113 number of participants which is 27.7%. 41-

50 is another group which has 32 number of participants and it is 7.5%. the last participating age group is 51+ which had just 2 participants and 0.5%.

Next question in the demographic section was qualification of participant and the highest number of participants 172 completed they're undergraduates which is 42.2%. Second group was post graduates participants 148 around 36.3%. The participants who had done their PhD were 82 about 20.1% and others was the last option and 6 participants marked it 1.5% of 100%.

Next question was about the employment status of participants and the highest group out of five categorized groups was *"students"* which scored 138 which is 33.8%. After this the *"full-time employees"* 126 around 30.9%. 89 number of participants were from *"part-time employee"* group which is 21.8%. 31 *"freelancers"* about 7.6% participated in the questionnaire. Last option was *"others"* which had just 1 participant of 0.2% out of 100%. Table 4.1 and figure 4.2 shows the demographic information of all the participants.

Table 4.1: Demographic information of the participants

Nationality	Demographic information	Values	Number	Percentage %
	Gender	Male	81	63.5
		Female	35	36.5
	Age group	Under 20	8	11.8
		21-30	84	52.2
		31-40	16	27.7
		41-50	7	7.5
		51+	1	0.5
	Education	Undergraduate	58	42.2 36.3
		Postgraduate PhD	39	20.1
		other	15	1.5
			4	
PAKISTANI (112 Participants)	Employment	Full-Time	42	30.9
		Part-Time	12	21.8
		Student	45	33.8
		Freelancer	10	7.6

		Unemployed	6	5.6
		other	1	0.2

Continues to Table 4.1…

Nationality	**Demographic information**	**Values**	**Number**	**Percentage %**
CYPRIOT (77 Participants)	Gender	Male	36	46.8
		Female	41	53.2
	Age group	Under 20	4	5.2
		21-30	55	71.4
		31-40	14	18.2
		41-50	3	3.4
		51+	1	1.3
	Education	Undergraduate	22	28.6
		Postgraduate	29	37.7
		PhD	25	32.5
		other	1	1.3
	Employment	Full-Time	13	16.9
		Part-Time	22	28.6
		Student	24	31.2
		Freelancer	9	11.7
		Unemployed	9	11.7
		other	0	0
TURKISH (89 Participants)	Gender	Male	46	51.7
		Female	33	48.3
	Age group	Under 20	15	16.9 36
		21-30	32	38.2
		31-40	34	9
		41-50	8	0
		51+	0	
	Education	Undergraduate Postgraduate	32	36
			36	40.4
		PhD	21	23.6

		other	0	0
	Employment	Full-Time	26	29.2
		Part-Time	19	21.3
		Student	34	38.2
		Freelancer	4	4.5
		Unemployed	6	6.7
		other	0	0
otherS (126 Participants)	Gender	Male	96	76.2
		Female	30	23.8
	Age group	Under 20 21-30	21	16.7
		31-40	42	33.3
			49	38.9
		41-50	14	11.1
		51+	0	0
	Education	Undergraduate	60	47.6
		Postgraduate	44	34.9
		PhD	21	16.7
		other	1	0
	Employment	Full-Time	45	35.7
		Part-Time	36	28.6
		Student	35	27.8
		Freelancer	8	6.3
		Unemployed	2	1.6
		other	0	0

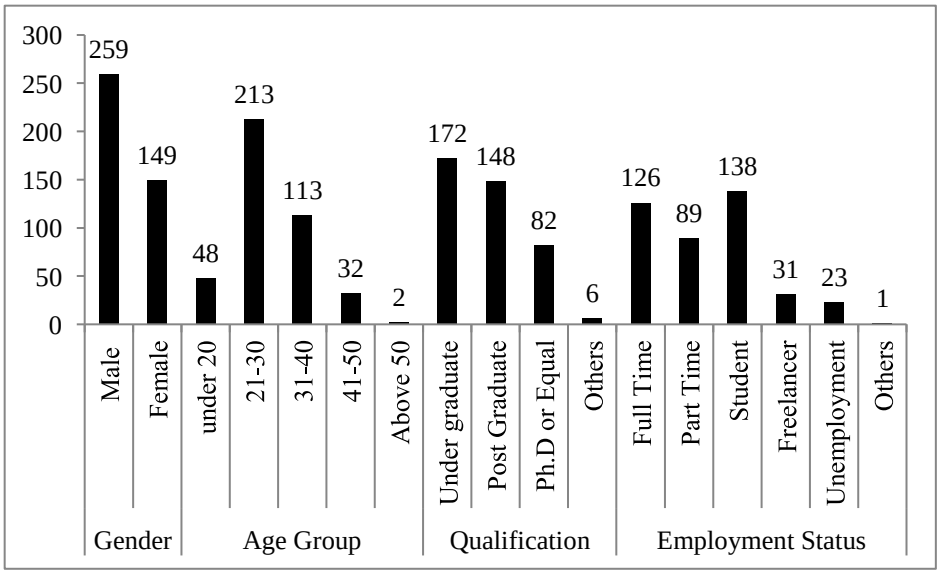


Figure 4.2: Demographic information of the participants

When it comes to how many participants of each nationalities took part in this study? following figure shows that 116 Pakistani, Cypriots 77, Turkish 89 and other nationalities were 126 who were living in Northern Cyprus during the study period and took part in this study. Figure 4.3 shows the details of participants based on nationalities.

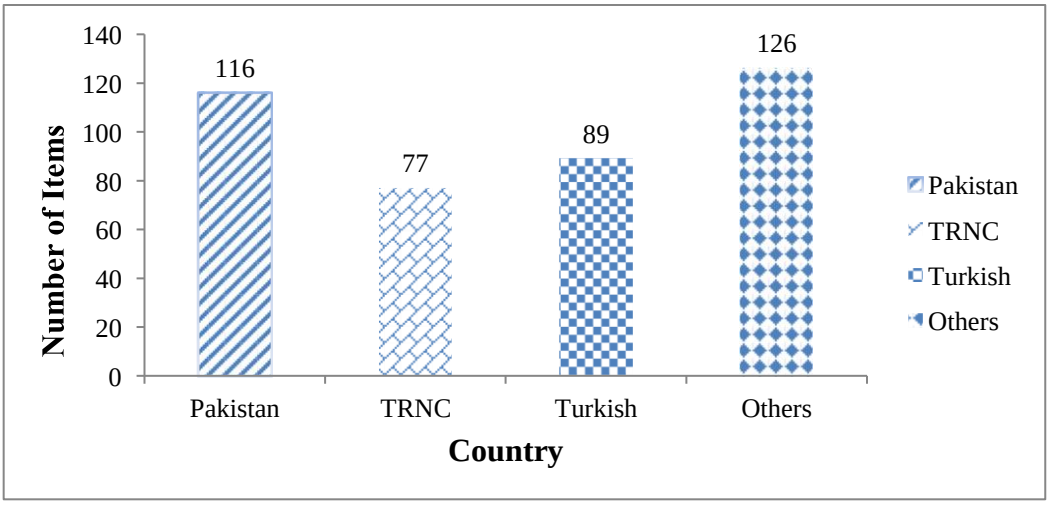


Figure 4.3: Number of participants accounting to country wise

4.4 Data Collection Tools

As Blockchain is new technology and there is limited research on this technology and there is no such questionnaire which suits the best with this study, so the researcher made a literature review of BCT in detail and prepared an online questionnaire based on the idea from the related research under supervision of the supervisor.

To collect the data an online questionnaire was conducted. It was circulated using social media resources such as LinkedIn, Twitter, WhatsApp and Facebook, also via emails. The research model used in this study includes dimensions from TAM which was adopted from a study by Davis (1989) and Perceived Usefulness has been taken from the study. The model was modified by the researcher and six more dimensions (Perceived Risk, Social Influence, Attitude, benefits of BBAs and Intention to use) were added to the model that were adapted from previous studies by other researchers in order to gain a better insight of the factors influencing adults' intention to use BCT based applications (BBAs). Following table shows the dimensions used in the research.

Table 4.2: Research model dimensions

Dimensions	**References**
Perceived Usefulness	(Nysveen et al. 2005)
Perceived Ease of Use	(Davis, 1989)
Perceived Risk	(Featherman and Pavlou, 2002)
Intention to Use	(Hsu et al., 2008)
Benefits	Author
Social influence	(Hsu et al., 2008)
Attitude	(Taylor et al., 1995)

The questionnaire was conducted only in English language and the study was conducted in Northern Cyprus and targeted nationalities were Pakistani, Cypriot, Turkish and others nationals such as Iraqi, Zambian, Canadian, Indian, Nigerian etc. who know English language. The questionnaire was consisting of two sections which are briefly explained below and figure 4.4 show the structure of questionnaire.

Section I: The first section is about demographic information of participants, consist of 5 questions i.e. participants were asked about gender, though there was not restriction to mention gender, age of participants, level of education, profession and nationality was asked as well.

Section II: This section is about the factors influencing adult intention to use BBAs. It has 7 sub-categories which are rated based on five Likert scale i.e. "*strongly agree"* with a value of 5 to "*strongly disagree"* which has value of 1.

Perceived Usefulness: This variable was proposed by Nysveen et al, (2005) and the aim of this variable is to identify degree to which a participant thinks that using BBAs would improve the job performance. This subsection has 4 questions. The calculated Cronbach alpha for this variable is 0.833 which is a considerable value.

Perceived Ease of Use: The second sub-section is perceived ease of use proposed by Davis (1989) and the aim of this variable is to analyze the degree to which a user thinks that utilizing BBAs would be effortless. For this study, this subsection has 4 questions and the calculated Cronbach alpha is 0.797.

Perceived Risks: The third sub-section is perceived risks; this is taken from Featherman and Pavlou (2002) and the aim of this variable is to identify the risks which a user/participant thinks or already faced while using BBAs. This subsection has 6 questions and calculated Cronbach alpha is 0.834 for this variable.

Benefits: Fourth subsection is about Benefits of BBAs it has 5 questions and this is additional variable to the extended TAM. The researcher found that there is limited research

on BCT and its applications and adults are not much aware of benefits of BCT. To fill this gap in the research, the researcher added this variable to the extended TAM. The Cronbach alpha for this variable is 0.841.

Social Influence: Fifth subsection is about social influence to use BBAs which have 3 questions and taken from Hsu et l., (2008). The aim of this variable is to identify the social factors which influence adults to use or not to use BBAs. The Cronbach alpha for this variable is 0.721.

Attitude: The second last subsection is about adults' attitudes using BBAs which have 3 questions and the reference from which this variable taken is; Taylor et al., (1995) the aim of this variable is to figure out the factors and the dependencies which makes adults to use or not to use BBAs. The Cronbach alpha for this variable is 0.804.

Behavioral Intention: Last subsection is Intention to use BBA which has 3 questions and this variable is taken from Hsu et al., (2008). The Cronbach alpha for this variable is 0.767.

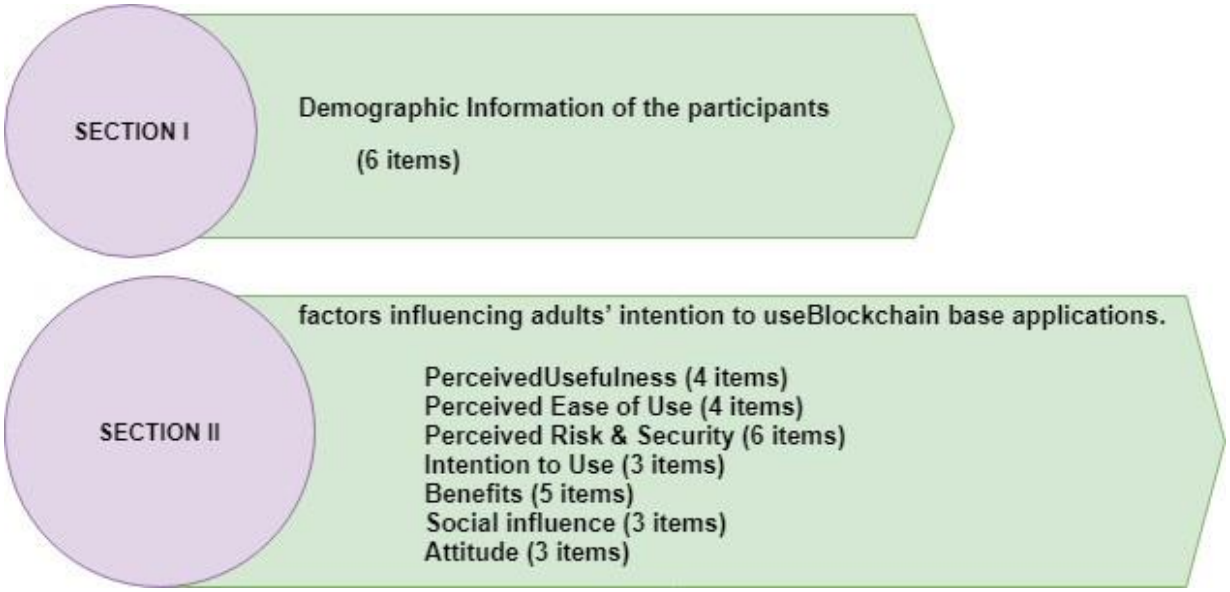


Figure 4.4: Structure of the questionnaire

4.4.1 Reliability Test of Questionnaire Dimensions

According to Malley and George (2003) if the reliability results are less or equal to .50 it is unacceptable, from .50 to .60 poor reliability, from .61 to .70 it is questionable and when reliability is .71 to .80 it is acceptable, a good reliability lie above .80 and finally an excellent reliability is more than 0.9.

For this study the total Cronbach alpha is .937 for the parameters of questionnaire and this is an excellent relatability for the scientific study which is a good point of this study. The following table shows the reliability test results for the components of TAM adopted for this study.

Table 4.3: Cronbach alpha test result

Constructs	**No. of items**	**Cronbach Alpha**
Perceived Usefulness	4	.833
Perceived Ease of Use	4	.797
Perceived Risk	6	.834
Intention to Use	3	.767
Benefits	5	.841
Social influence	3	.721
Attitude	3	.804
Total	**28**	**0.937**

4.5 Data Analysis Method

The collected data using online questionnaire was analyzed using following methods.

- For the demographic data of participants, researcher used descriptive statistics.
- To determine the relationship between dependent and independent variables, researcher used Pearson correlation method.

4.6 Research Schedule

This section briefly explains the schedule carried out by the researcher in completing this study and figure 4.6 shows the description:

1. The most important phase is literature review which is an on-going process for any study until it finishes because researcher needs to follow the most recent and relevant to this research.
2. On the bases of literature review, researcher selected the topic for this study and a research proposal was submitted to the department of Computer Information Systems.
3. To check the feasibility of the questionnaire, the questionnaire was reviewed by supervisor and approved to it to ethical committee of Near East University
4. The Ethical committee provided approval after reviewing the questionnaire and the ethics covered by study.
5. The questionnaire was disturbed online via email and social media such as Facebook, LinkedIn, WhatsApp etc.
6. Once the data has been collected, researcher entered the data into SPSS to analysis it.
7. Data analysis has been carried out with the most appropriate methods and retrieved the results.
8. The feedback from supervisor has been considered in each phase.
9. Thesis was presented to jury, the changes from jury board has been considered until the final thesis was approved.

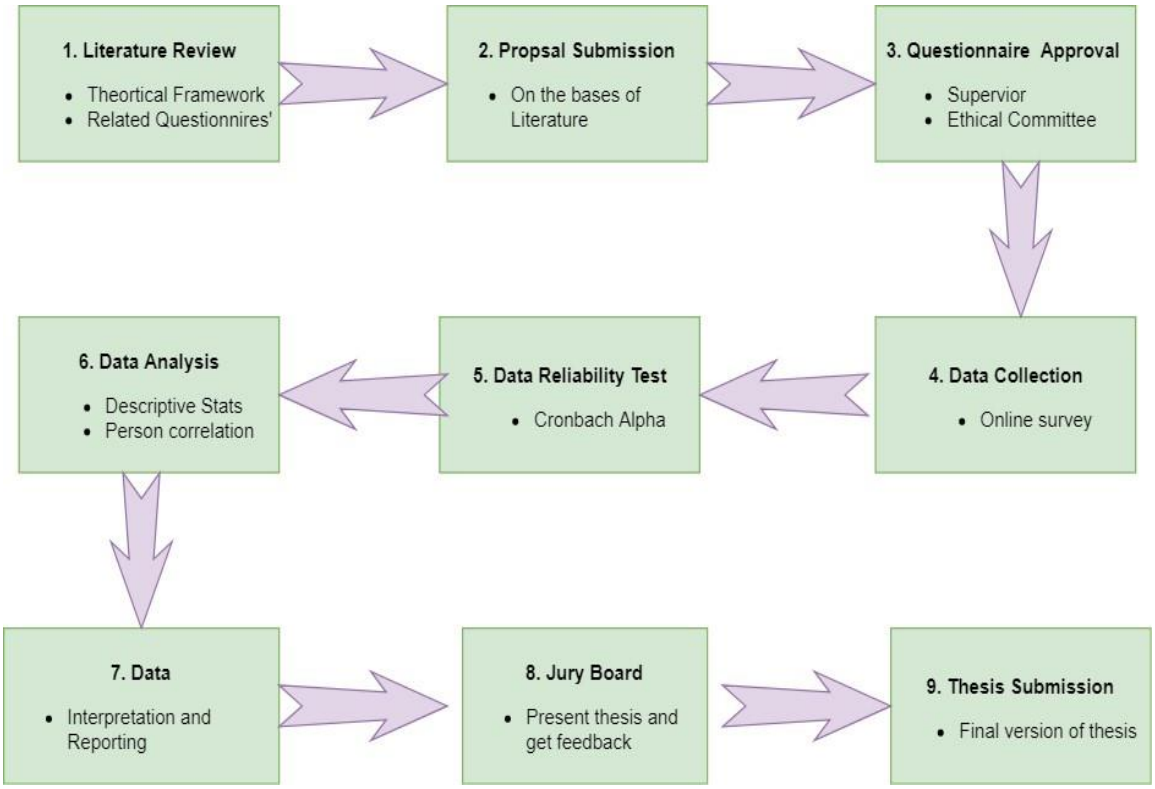


Figure 4.5: Research schedule

4.6.1 Ethical Considerations

Ethics are the norms for conduct research that extricate between just two parameters i.e. right and wrong. Which distinguish the behaviors which may are satisfy or unsatisfied, so in purpose of conducting research at Near East University, a committee is responsible for verifying the validity of the questionnaire proposed by the researcher. The ethical considerations for a research are very important thing which verifies the truthfulness of the data used for the study and the questionnaire. The ethical consideration has been carried out by notifying the scientific research committee on the ethics for an evolution and a subsequent approval of all the ethical considerations governing Near East University for conducting a research. The researcher needed to follow this rule and get approval from the ethical committee. The approval paper provided by committee has be added to Appendix 2.

4.6.2 Research Procedure

The topic of the study was assigned to the researcher by the supervisor. Initial step taken by researcher to select the topic; a review of literature was carried out. On the bases of literature review the researcher wrote a proposal and submit it to the supervisor. After approval of proposal by respected supervisor a questionnaire was prepared. As the research topic is quite new and there is very limited research on it so researcher prepared a questionnaire under supervision of supervisor based on the idea get from the related research done so for. Once the questionnaire was approved by supervisor and ethical committee of Near East university, the researcher collected the data, then to analysis each component of TAM researcher carried out a reliability test. The results showed that questionnaire results satisfy acceptable internal consistency. The questionnaire was based on internet and circulated through social media and emailing systems. Data collection took 2 weeks and after this step the data was analyses by entering the data into SPSS. After the data analysis step the thesis report was written and finally, submitted to the supervisor for review and corrections. After a valuable information and corrections provided by supervisor the thesis was presented to jury for their valuable feedbacks.

Table 4.4: Research procedure

Procedure	**Duration (Weeks)**
Literature review (on-going process)	8
Writing thesis proposal	3
Proposal submission and feedback	3
Adopted Questionnaire	6
Data Collection	2
Data Analysis	3
Compiling Thesis	3
Thesis review by supervisor	2
Corrections on feedback by supervisor	3
Total	**33 Weeks**

CHAPTER 5 RESULTS AND DISCUSSIONS

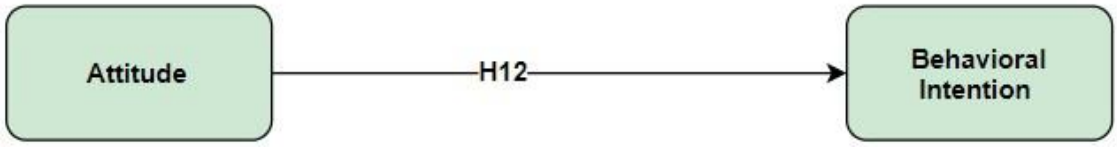
In this chapter, the researcher has discussed the results which were found during the research. According to (Rumsey, 2016), coefficient of correlation "r" value must be between -1 and +1. It measures the direction of linear relationship among two variables. Rumsey proposed a scale division as when the value of r is -1, the variables having a perfect negative linear relationship, when r -0.70 the relationship is a strong negative, -0.50 is a moderate negative correlation among the variables and when values lies between -0.31 there is weak negative relationship. And when value is absolute 0, there is no relationship among the variables. When the r is + 0.30 there is a weak positive relationship, if r is +0.50, there is a moderate positive relation, when r is +0.70 relationship is a strong and finally when relation is exactly 1, the relation is perfect linear relationship.

5.1 Correlation of Research Model Variables

In this section, the researcher discussed the results of 12 proposed hypotheses.

5.1.1 The Relationship among Perceived Ease of Use and Perceived Usefulness

H1: *A Perceived Ease of Use has a positive effect on Perceived Usefulness of BBAs*



In order to find out the relationship that exist between Perceived Ease of Use and Perceived Usefulness, a Pearson correlation was computed and result shown in Table 5.1.1.

Table 5.1.1: Pearson correlation between PEU and PU

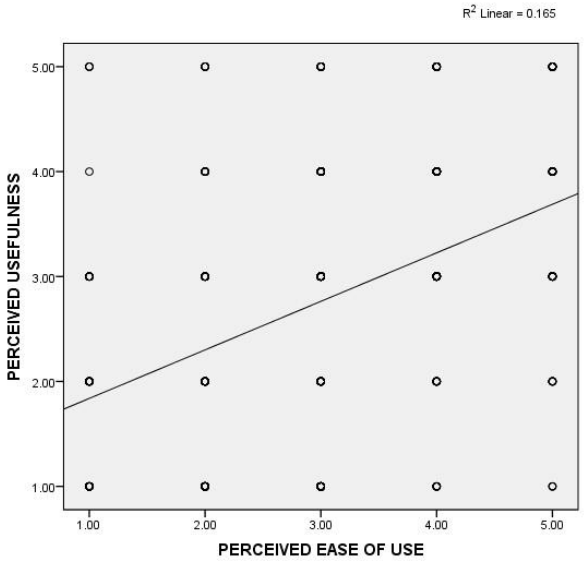
	Perceived Ease of Use	**Usefulness**

Perceived Ease of Use	Pearson correlation	1	.504**
	Sig. (2-tailed)		0
	N	408	408
Usefulness	Pearson correlation	.504**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The result of verified hypothesis shown a moderate positive relationship between Perceived Ease of Use and Perceived Usefulness at (r = 0.504, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.1 The graph depicted that as Perceived Ease of Use increase so as the Perceived Usefulness to us increased at R^2 linear = 0.250.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

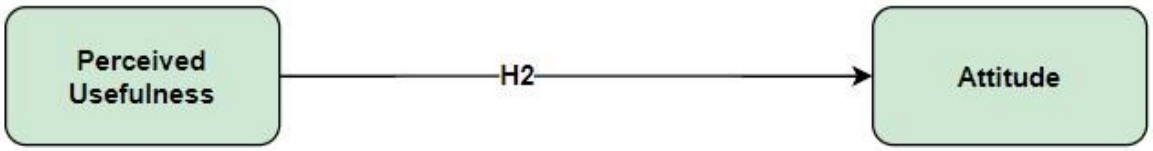
Figure 5.1.1: Scatter graph shows the relationship between PEU and PU

Since p<=0.05 with r = 0.504 therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect toward Perceived Usefulness of BBAs.

A similar study by Sifaleras and Petridis (2019) examined behavioral intention to use BCT, they found that PEU had affect relation with PU. that perceived ease of use affects the Perceived to usefulness of BCT. This hypothesis is stated to confirm the assertion that PEU affects the PU of BCT.

5.1.2 The Relationship among Perceived Usefulness and Attitude

H3: *A Perceived Usefulness has a positive effect on adults Attitudes towards using BBAs.*



In order to find out the relationship that exist between Perceived Usefulness and adults' Attitude a Pearson correlation was computed and the result is shown in Table 5.1.2.

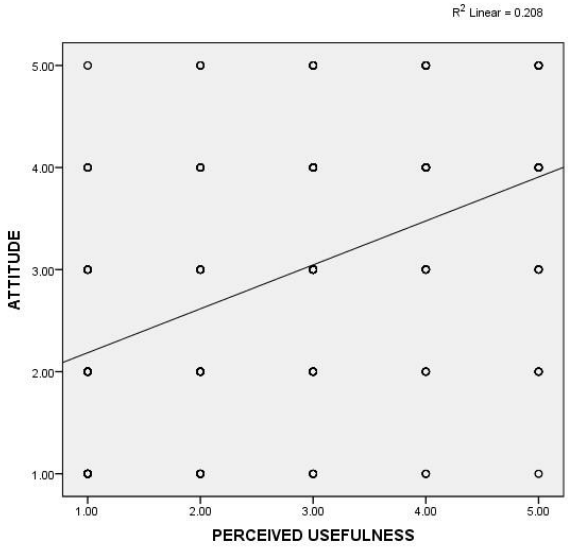
Table 5.1.2: Pearson correlation between PU and ATT

		Perceived Usefulness	**Attitude**
Perceived Usefulness	Pearson correlation	1	.541**
	Sig. (2-tailed)		0
	N	408	408
Attitude	Pearson correlation	.541**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a moderate positive relationship between Perceived Usefulness and Attitude at (r = 0.541, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.2 The graph depicted that as Attitude increase so as the Perceived Usefulness increased at R^2 linear =0. 208



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

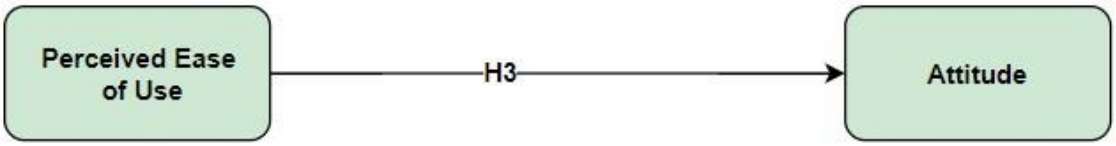
Figure 5.1.2: Scatter graph shows the relationship between PU and ATT

Since p<=0.05 with r = 0.541 therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect toward adults Attitudes to use BBAs.

A similar study by Saad and Kyeong (2018) examined Adoption of BST among individuals and found that PU had affect correlation with individuals' attitude towards using BCT. This hypothesis is stated to confirm the assertion that adult PU affects the individuals' attitude towards using BBA.

5.1.3 The Relationship between Perceived Ease of Use and Attitude

H3: *A Perceived Ease of Use has a Positive effect on adults Attitudes towards using BBAs.*



In order to find out the relationship that exist between Perceived Ease of Use and adults' Attitude towards usage of BBAs, a Pearson correlation was computed and result shown in Table 5.1.3.

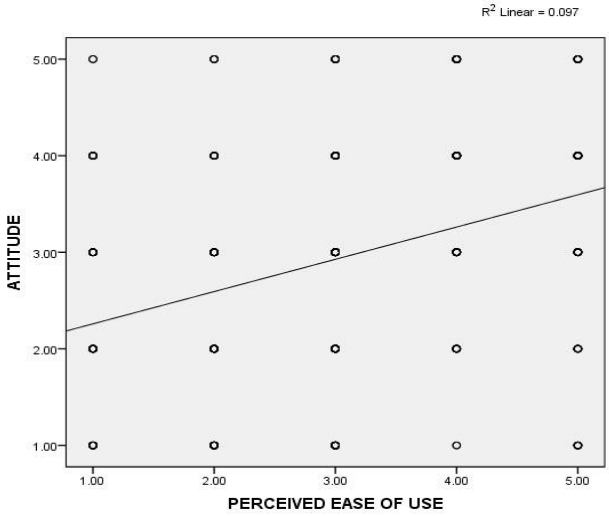
Table 5.1.3: Pearson correlation between PEU and ATT

		Perceived Ease of Use	**Attitude**
Perceived Ease of Use	Pearson correlation	1	.489**
	Sig. (2-tailed)		0
	N	408	408
Attitude	Pearson correlation	.489**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a weak positive relationship between Perceived Ease of Use and Attitude at ($r = 0.489$, $n = 408$ and $p = 0.000$).

Scatterplot graph in Figure 5.1.3 The graph depicted that as Attitude increase so as the Perceived Ease of Use increased at R^2 linear = 0.097



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

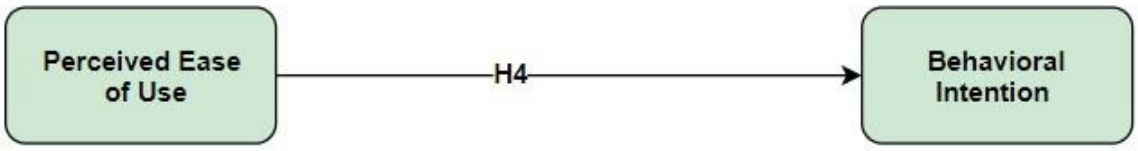
Figure 5.1.3: Scatter graph shows the relationship between PEU and ATT

Since p<=0.05 with r = 0.559 therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect toward adults Attitudes to use BBAs.

A similar study by Levy et al. (2018) examined cryptocurrencies among adults and found that cryptocurrencies are widely used by adults from the developing nations. This hypothesis is stated to confirm the assertion that PEU positive effect on adults' attitudes towards using BBAs.

5.1.4 The Relationship between Perceived Ease of Use and Behavioral Intention

H4: *Perceived Ease of Use have a positive effect on Behavioral Intention to use BBAs.*



In order to find out the relationship that exist between Perceived Ease of Use and Behavioral Intention among adults a Pearson correlation was computed and result shown in Table 5.1.4

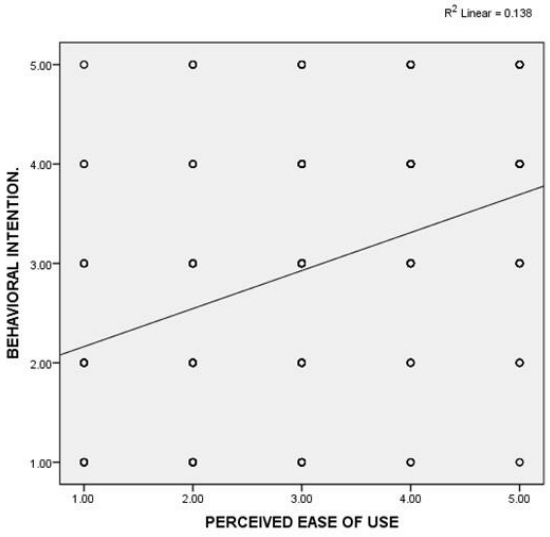
Table 5.1.4: Pearson correlation between PEU and INT

		Perceived Ease of Use	**Behavioral Intention**
Perceived Ease of Use	Pearson correlation	1	.49**
	Sig. (2-tailed)		0
	N	408	408
Behavioral Intention	Pearson correlation	.49**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a weak positive relationship between Perceived Ease of Use and Behavioral Intention at (r = 0.49, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.4 The graph depicted that as Perceived Ease of Use increase so as the Behavioral intention to us increased at R^2 linear = 0.138



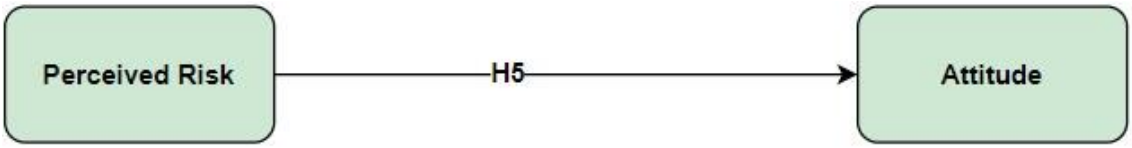
1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree **Figure 5.1.4:** Scatter graph shows the relationship between PEU and INT

Since p<=0.05 with r = 0.49 therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect toward Behavioral Intention to use BBAs among the adults.

A similar study by Sifaleras and Petridis (2019) examined behavioral intention to use BCT, they found that PEU had effect relation with behavioral intention to use BCT. This hypothesis is stated to confirm the assertion that PEU affects adults' behavioral intention to use BCT.

5.1.5 The Relationship between Perceived Risks and Attitude

H5: *Perceived Risk has a positive effect on adults Attitudes towards using BBAs.*



In order to find out the relationship that exist between Perceived Risks and Attitude among adults a Pearson correlation was computed and the result shown in Table 5.1.5.

Table 5.1.5: Pearson correlation between PR and ATT

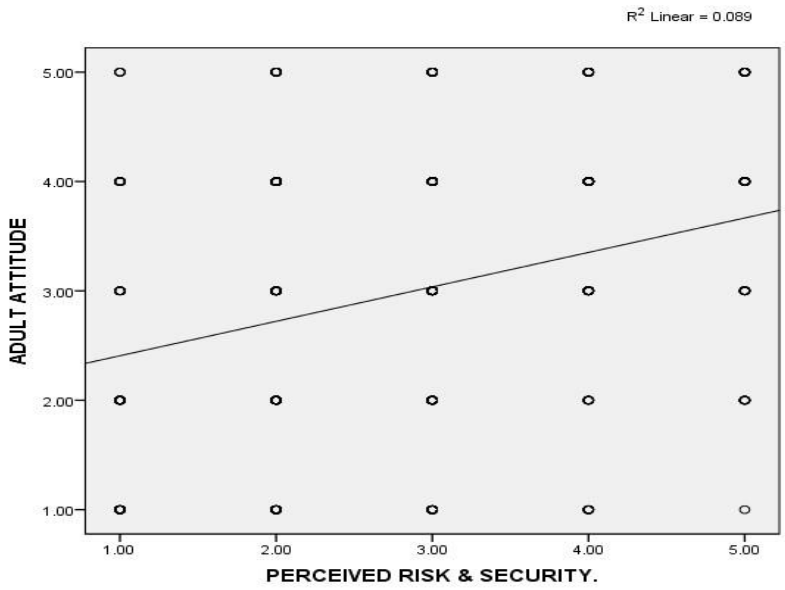
		Perceived Risk	**Attitude**
Perceived Risk	Pearson correlation	1	.64**
	Sig. (2-tailed)		0
	N	408	408
Adult Attitude	Pearson correlation	.64**	1

	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a moderate positive relationship between Perceived Risks and Attitude at (r = 0.64, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.5 The graph depicted that as Attitude increase so as the Perceived Risks to us increased at R^2 linear = 0.089



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.1.5: Scatter graph shows the relationship between PR and ATT

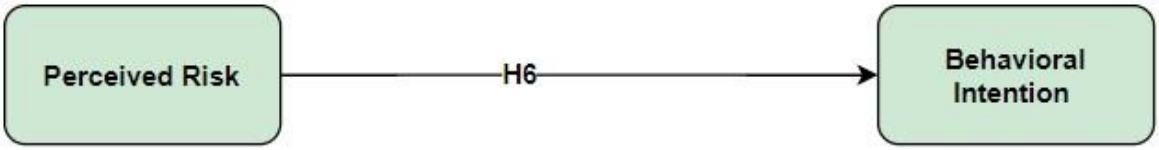
Since p<=0.05 with r = 0.64 therefore the hypothesis has been accepted and concluded that Perceived Risk have shown a considerable positive effect toward Behavioral Intention to use BBAs among the adults.

A similar study by Sifaleras and Petridis (2019) examined behavioral intention to use BCT, they found that PEU had affect relation with behavioral intention to use BCT. This

hypothesis is stated to confirm the assertion that PR affects adults' attitude towards use of BBAs.

5.1.6 The Relationship between Perceived Risks and Behavioral Intention

H6: *Perceived Risks have a positive effect on Behavioral Intention to use BBAs.*



In order to find out the relationship that exist between Perceived Risks and Behavioral Intention among adults a Pearson correlation was computed and the result shown in Table 5.1.6.

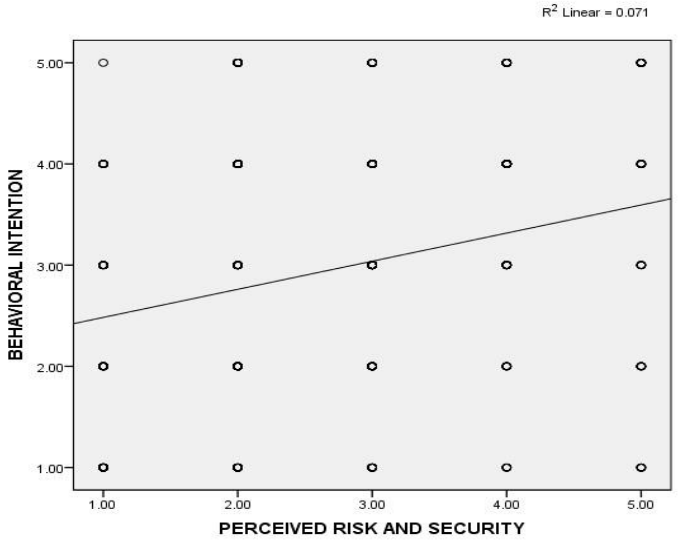
Table 5.1.6: Pearson correlation between PR and ATT

		Perceived Risk	**Intention**
Perceived Risk	Pearson correlation	1	.38**
	Sig. (2-tailed)		0
	N	408	408
Intention	Pearson correlation	.38**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed)

The hypothesis tested showed a weak positive relationship between Perceived Risks and Behavioral Intention to use BBAs at ($r = 0.38$, $n = 408$ and $p = 0.000$).

Scatterplot graph in Figure 5.1.6 The graph depicted that as Perceived Risks increase so as the Behavioral intention to us increased at R^2 linear = 0.250



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

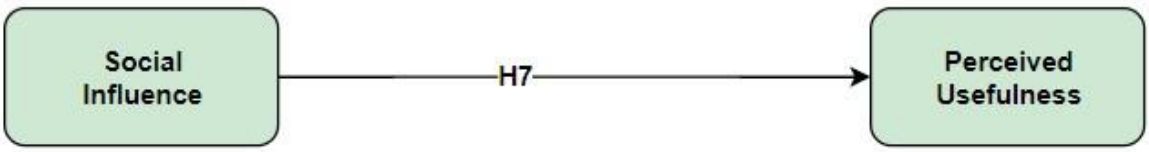
Figure 5.1.6: Scatter graph shows the relationship between INT and PR

Since p<=0.05 with r = 0.38 therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect toward Behavioral Intention to use BBAs among the adults.

A similar study by Roussou and Stiakakis (2018) examined adoption of digital money and found that PR had affect behavioral intention to use digital money. This hypothesis is stated to confirm the assertion that PR affects adults' behavioral intention to use BBAs.

5.1.7 The Relationship between Social Influence and Perceived Usefulness *H7:*

Social Influence have a positive effect on Perceived Usefulness.



In order to find out the relationship that exist between Social Influence and Perceived Usefulness on usage of BBAs among adults a Pearson correlation was computed and result shown in Table 5.1.7.

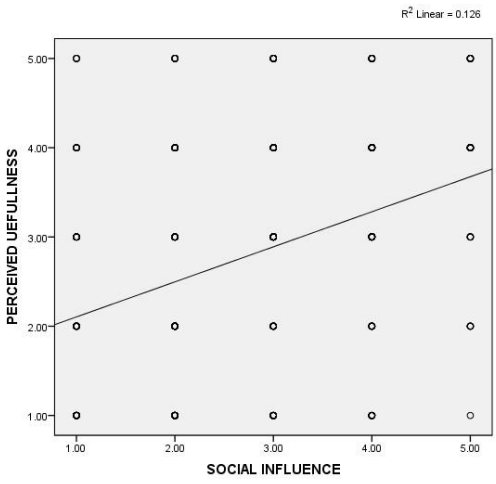
Table 5.1.7: Pearson correlation between SI and PU

		Social Influence	**Perceived Usefulness**
Social Influence	Pearson correlation	1	.448**
	Sig. (2-tailed)		0
	N	408	408
Perceived Usefulness	Pearson correlation	.448**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a moderate positive relationship between Social Influence and Perceived Usefulness to use BBAs at (r = 0.448, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.7 showed the relationship between Social Influence and Perceived Usefulness. The graph depicted that as Social Influence increase so as the Perceived Usefulness to us increased at R^2 linear = 0.126



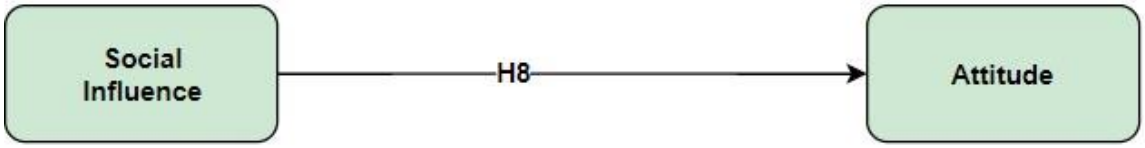
1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree **Figure 5.1.7:** Scatter graph shows the relationship between SI and PU

Since p<=0.05 with r = 0.44 therefore the hypothesis has been accepted and concluded that social Influence have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

A similar study by Satadruti and Mitra (2017) examined e-wallets and found that SI had affect PU to use digital money. This hypothesis is stated to confirm the assertion that SI affects PU to use digital money.

5.1.8 The Relationship between Social Influence and Attitude

H8: *Social Influence have a positive effect on Adults attitudes to use BBAs.*



In order to find out the relationship that exist between Social Influence and Attitude towards usage of BBAs, a Pearson correlation was computed and the result shown in Table 5.1.8.

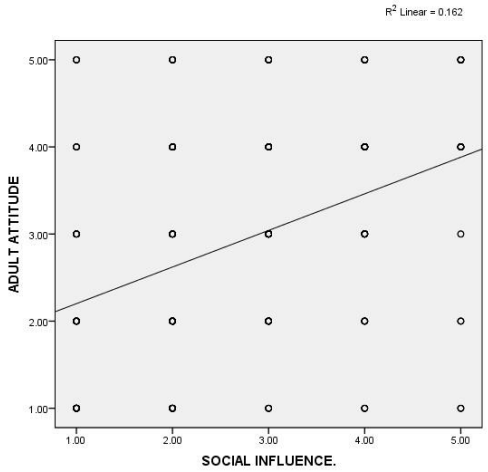
Table 5.1.8: Pearson correlation between SI and ATT

		Social Influence	**Adult Attitude**
Social Influence	Pearson correlation	1	.501**
	Sig. (2-tailed)		0
	N	408	408
Adult Attitude	Pearson correlation	.501**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a moderate positive relationship between Social Influence and Behavioral Intention to use BBAs at (r = 0.501, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.8 The graph depicted that as Social Influence increase so as the Behavioral intention to us increased at R^2 linear = 0.162



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

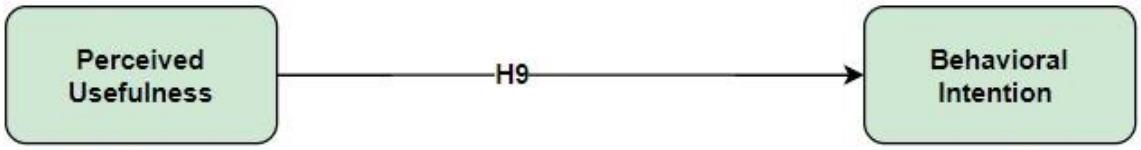
Figure 5.1.8: Scatter graph shows the relationship between SI and ATT

Since p<=0.05 with r = 0.501 therefore the hypothesis has been accepted and concluded that social influence has shown a considerable positive effect toward adults' attitude.

A similar study by Jin et al. (2018) examined intention to use cryptocurrencies and found that cryptocurrencies are widely used and SI affect attitude towards using cryptocurrencies. This hypothesis is stated to confirm the assertion that SI affects adults' attitude towards using BBAs.

5.1.9 The Relationship between Perceived Usefulness and Behavioral Intention

H9: *Perceived Usefulness have a positive effect on Behavioral Intention to use BBAs.*



In order to find out the relationship that exist between Perceived Usefulness and Behavioral Intention on usage of BBAs among adults a Pearson correlation was computed and the result shown in Table 5.1.9.

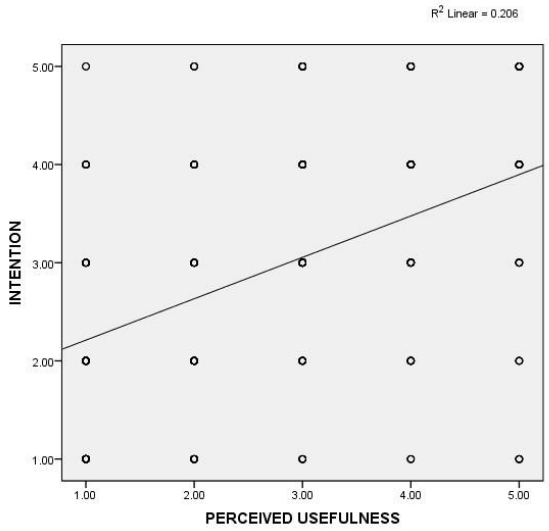
Table 5.1.9: Pearson correlation between PU and INT

		Perceived Usefulness	**Behavioral Intention**
Perceived Usefulness	Pearson correlation	1	.56**
	Sig. (2-tailed)		0
	N	408	408
Behavioral Intention	Pearson correlation	.56**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a moderate positive relationship between Perceived Usefulness and Behavioral Intention to use BBAs at ($r = 0.56$, $n = 408$ and $p = 0.000$).

Scatterplot graph in Figure 5.1.9 The graph depicted that as Perceived Usefulness increase so as the Behavioral intention to us increased at R^2 linear = 0.206



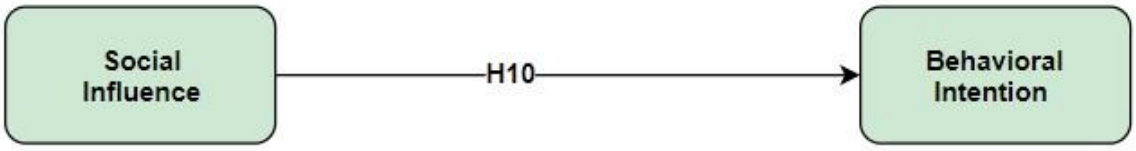
1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree **Figure 5.1.9:** Scatter graph shows the relationship between INT and PU

Since p<=0.05 with r = 0.56 therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect toward Behavioral Intention to use BBAs among the adults.

A similar study by Anjelina (2018) examined use of e-money and found that e-money are widely used and PU affect behavioral intention to use it. This hypothesis is stated to confirm the assertion that PU affects adults' intention to use BBAs.

5.1.10 The Relationship between Social Influence and Behavioral Intention

H10: *Social Influence have a positive effect on Behavioral Intention to use BBAs.*



In order to find out the relationship that exist between Social Influence and Behavioral Intention on usage of BBAs among adults a Pearson correlation was computed and result the shown in Table 5.1.10.

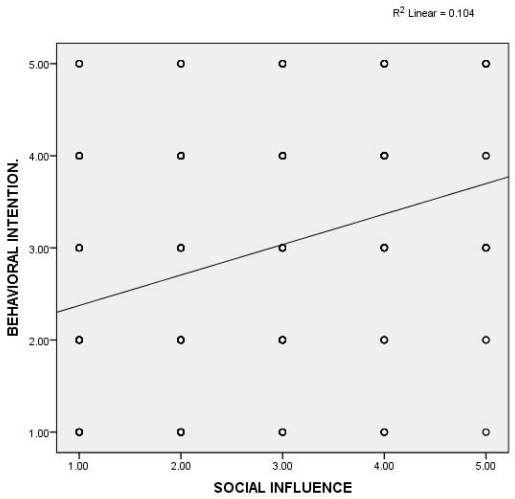
Table 5.1.10: Pearson correlation between SI and INT

		Social Influence	**Behavioral Intention**
Social Influence	Pearson correlation	1	.40**
	Sig. (2-tailed)		0
	N	408	408
Behavioral Intention	Pearson correlation	.40**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed).

The hypothesis tested showed a weak positive relationship between Social Influence and Behavioral Intention to use BBAs at (r = 0.40, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.10 The graph depicted that as Social Influence increase so as the Behavioral intention to us increased at R^2 linear = 0.104



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

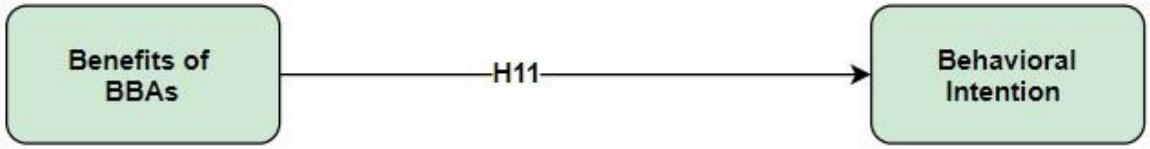
Figure 5.1.10: Scatter graph shows the relationship between INT and SI

Since p<=0.05 with r = 0.40 therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect toward Behavioral Intention to use BBAs among the adults.

A similar study by Joseph et al. (2017) adoption of BCT and found that SI affect behavioral intention to use it. This hypothesis is stated to confirm the assertion that SI affects adults' intention to use BBAs.

5.1.11 The Relationship between Benefits and Behavioral Intention

H11: *Benefits of BBAs have a positive effect on Behavioral Intention to use BBAs.*



In order to find out the relationship that exist between Benefits and Behavioral Intention on usage of BBAs among adults a Pearson correlation was computed and the result shown in Table 5.1.11.

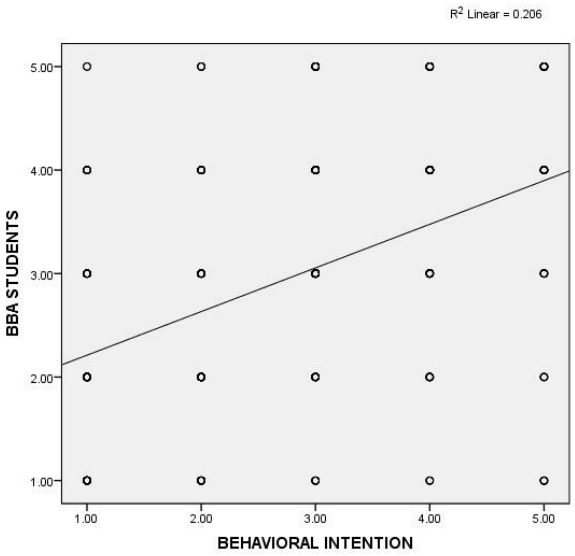
Table 5.1.11: Pearson correlation between BEN and INT

		Benefits	**Intention**
Benefits	Pearson correlation	1	.69**
	Sig. (2-tailed)		0
	N	408	408
Intention	Pearson correlation	.69**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2-tailed)

The hypothesis tested showed a moderate positive relationship between Benefits and Behavioral Intention to use BBAs at (r = 0.69, n = 408 and p = 0.000).

Scatterplot graph in Figure 5.1.12 The graph depicted that as Benefits increase so as the Behavioral intention to us increased at R^2 linear = 0.206



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

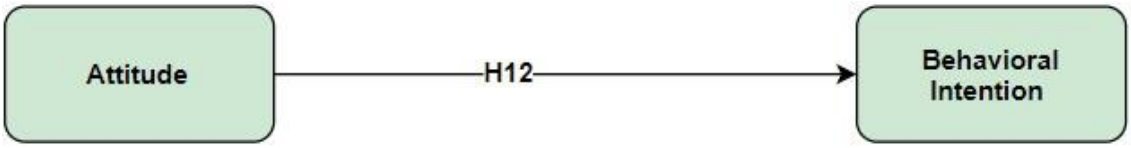
Figure 5.1.11: Scatter graph shows the relationship between INT and BEN

Since p<=0.05 with r = 0.559 therefore the hypothesis has been accepted and concluded that Benefits have shown a considerable positive effect toward Behavioral Intention to use BBAs among the adults.

A similar study by Joseph et al. (2017) adoption of BCT and found that benefits affect behavioral intention to use it. This hypothesis is stated to confirm the assertion that benefits of BBAs affects intention to use BBAs.

5.1.12 The Relationship between Attitude and Behavioral Intention

H12: *Adults attitudes have a positive effect on Behavioral Intention to use BBAs.*



In order to find out the relationship that exist amongst Attitudes and Behavioral Intention on usage of BBAs among adults a Pearson correlation was computed and the result shown in Table 5.1.12.

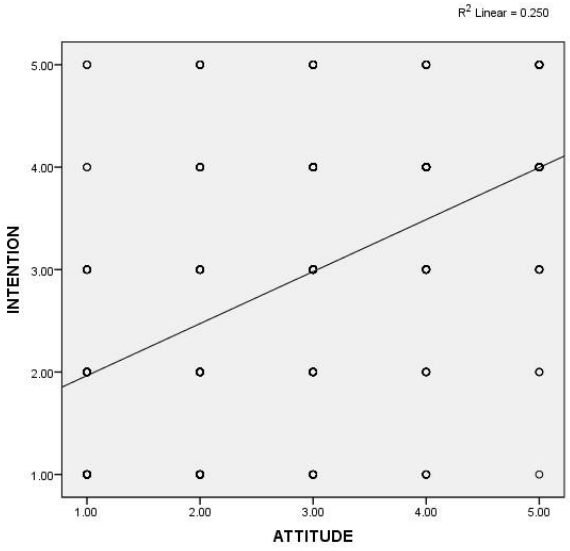
Table 5.1.12: Pearson correlation between ATT and INT

		Attitude	Behavioral Intention
Attitude	Pearson correlation	1	.559**
	Sig. (2-tailed)		0
	N	408	408
Behavioral Intention	Pearson correlation	.559**	1
	Sig. (2-tailed)	0	
	N	408	408

**Correlation is significant at the 0.01 level (2 -tailed).

The hypothesis tested showed a moderate positive relationship between Attitude and Behavioral Intention to use BBAs at (r = 0.559, n = 408 and p = 0.000).

Below scatterplot graph in Figure 5.1.12 showed the relationship between Attitude and Behavioral intention. The graph depicted that as Attitude increase so as the Behavioral intention to us increased at R^2 linear = 0.250



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.1.12: Scatter graph shows the relationship between INT and ATT

Since p<=0.05 with r = 0.559 therefore the hypothesis has been accepted and concluded that Attitudes have shown a considerable positive effect toward Behavioral Intention to use BBAs among the adults.

A similar study by Sachin et al. (2018). examined the adoption of BCT found that attitude affects the intention to use BCT. This hypothesis is stated to confirm the assertion that adult attitude affects the behavior intention to use BCT.

5.1.13 Summary of Findings

The objective of this study is to investigate the factors that influence adults' intention to use BBAs. This study carried out in Northern Cyprus. First thing down in this study was that researcher focused results overall, means that there is no nationality specify. In this section researcher already discussed all 12 proposed hypothesis which resulted as all positive correlation among variables of each hypothesis. The results findings are summarized in the following table.

Table 5.1.13: Summary of Findings

Hypothesis	IV	DV	Supported	Correlation Coefficient Positive/ Navigate (+/-)	R Value
H1	PEU	PU	YES	Moderate Positive	0.504
H2	PU	INT	YES	Moderate Positive	0.56
H3	PEU	ATT	YES	Weak Positive	0.489
H4	PEU	INT	YES	Weak Positive	0.49
H5	PR	ATT	YES	Moderate Positive	0.64
H6	PR	INT	YES	Weak Positive	0.38
H7	SI	PU	YES	Weak Positive	0.448
H8	SI	ATT	YES	Moderate Positive	0.501
H9	PU	ATT	YES	Moderate Positive	0.541
H10	SI	INT	YES	Weak Positive	0.40
H111	BEN	INT	YES	Moderate Positive	0.69
H12	ATT	INT	YES	Moderate Positive	0.559

This showed that all hypotheses resulted a moderate positive correlation expect H3, H4, H6, H7, H10 these hypotheses showed a weak positive correlation. Although it was a weak correlation but still it was a positive relationship among the variables. On the bases of results all the hypotheses supported so all of them were accepted.

5.2 Correlation of Research Model Variables According to Nationalities

In this section the research explained the outcome of Pearson correlation of variables according to the nationalities.

5.2.1 The Relationship among Perceived Ease of Use and Perceived Usefulness

H1: *A Perceived Ease of Use has a Positive effect on Perceived Usefulness to use BBAs*

In order to find out the relationship that exists amongst Perceived Ease of Use and Perceived Usefulness on usage of BBAs among adults according to nationalities i.e. Pakistani,

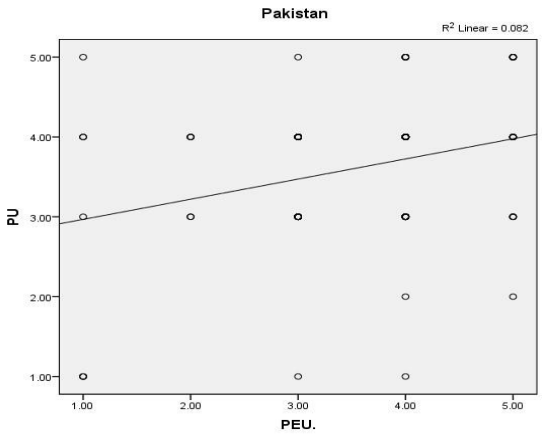
Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.1

Table 5.2.1: Pearson correlation amongst PU and PEU

		Pakistani		Cypriot		Turkish		others	
		PEU	**PU**	**PEU**	**PU**	**PEU**	**PU**	**PEU**	**PU**
PEU	Pearson correlation	1	.6181**	1	. 2931**	1	.381**	1	.6411**
	Sig. (2-tailed)		0.000*		0.002		0		0
	N	116	116	77	77	89	89	126	126
PU	Pearson correlation	.6181**	1	.2931**	1	. 381**	1	.6411**	1
	Sig. (2-tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .618 and p = .000 which shows that there is a moderate positive correlation between Perceived Ease of Use and Perceived. Which is shown in following figure.

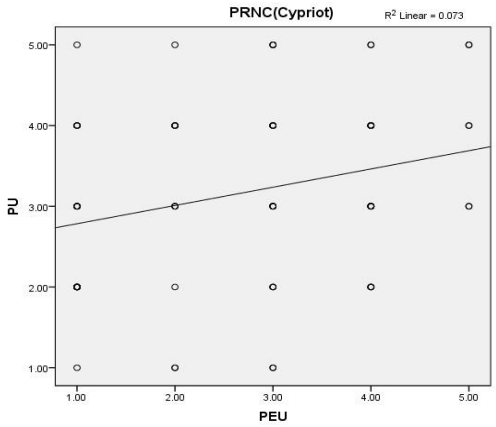


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.1: Scatter graph shows the relationship between PEU and PU Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Perceived Ease of Use and Perceived Usefulness, with r = .293, n=77 and p = .002. Which is shown in following figure.

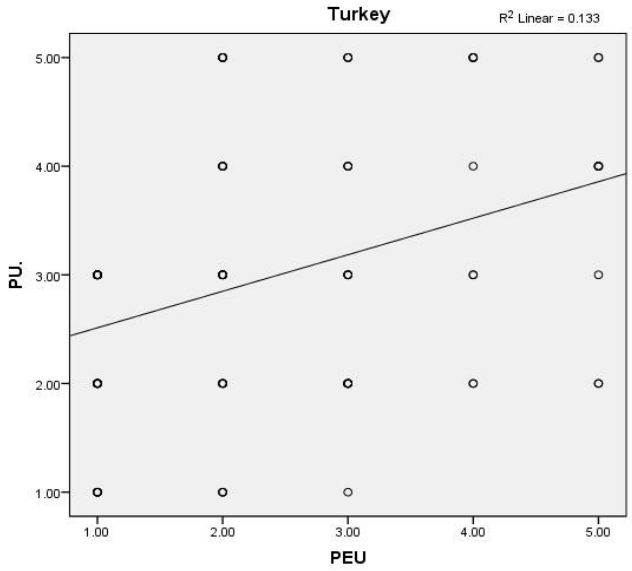


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.2: Scatter graph shows the relationship between PEU and PU Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .381, n=89 and p = .000. Which is shown in following figure.

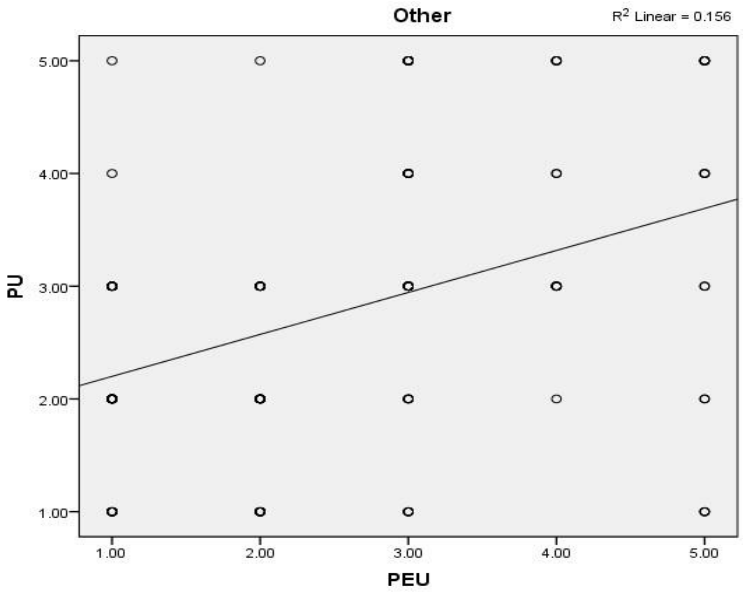


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.3: Scatter graph shows the relationship between PEU and PU Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .641, n=126 and p = .000. Which is shown in following figure.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.4: Scatter graph shows the relationship between PEU and PU other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

5.2.2 The Relationship among Perceived Usefulness and Attitude

H2: *A Perceived Usefulness has a Positive effect on adults Attitudes towards using BBAs.*

In order to find out the relationship that exists between Perceived Usefulness and adults Attitudes on usage of BBAs according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.2.

Table 5.2.2: Pearson correlation amongst PU and ATT

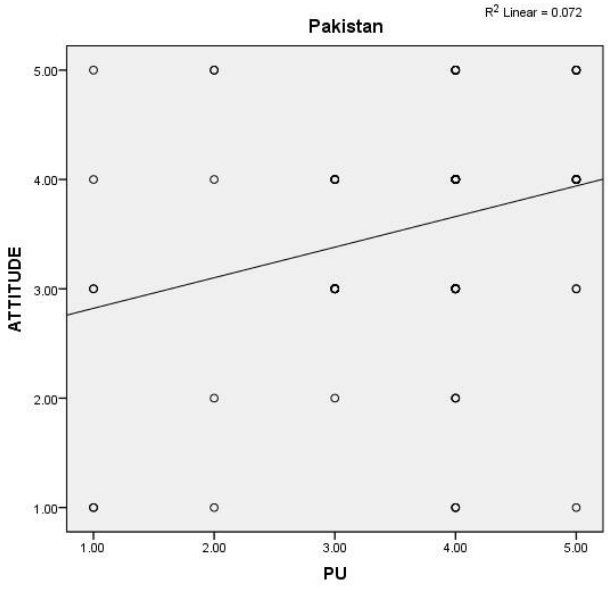
	Pakistani	**Cypriot**	**Turkish**	**others**

		PU	ATT	PU	ATT	PU	ATT	PU	ATT
	Pearson correlation	1	.513**	1	.444**	1	.5354**	1	.482 **
PU	Sig. (2-tailed)		0.000*		0.002		0.003*		0.000
	N	116	116	77	77	89	89	126	126
	Pearson correlation	.513**	1	.444**	1	. 5354**	1	.482**	1
ATT	Sig. (2-tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .447 and p = .000 which shows that there is a weak positive correlation between Perceived Usefulness and Attitudes, which is showing in following figure.

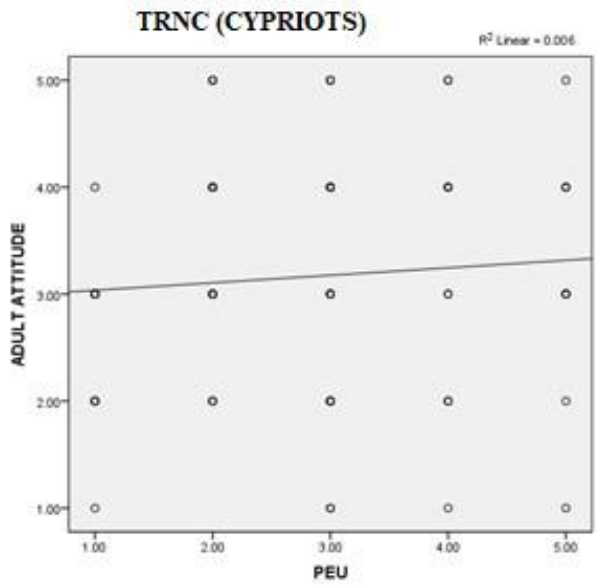


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.5: Scatter graph shows the relationship between PU and ATT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on adults Attitude towards use of BBAs.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Perceived Usefulness and Attitude, with r = .299, n=77 and p = .002. which is shown in following figure.

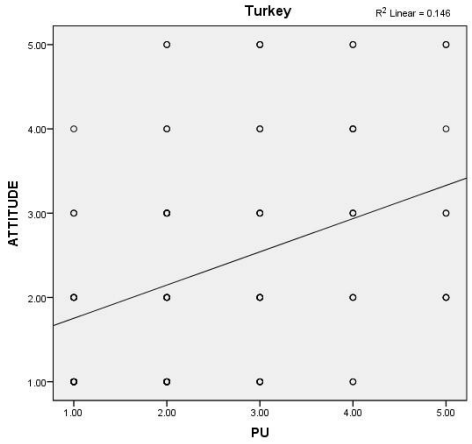


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.6: Scatter graph shows the relationship between PU and ATT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on adults towards use of BBAs.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .390, n=89 and p = .000. which is shown in following figure

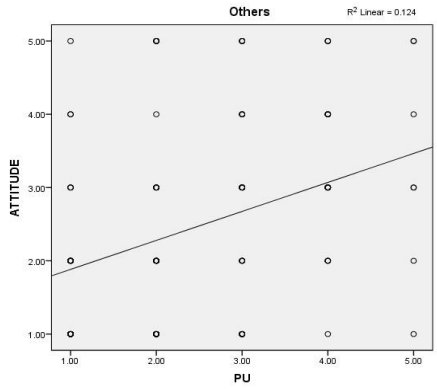


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.7: Scatter graph shows the relationship between PU and ATT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on adults Attitude to use BBAs.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .568, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.8: Scatter graph shows the relationship between PU and ATT other participants Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on adults Attitude to use BBAs.

5.2.3 The Relationship among Perceived Ease of Use and Attitude

H3: *A Perceived Ease of Use has a Positive effect on adults Attitudes towards using BBAs.*

In order to find out the relationship that exists between Perceived Ease of Use and adults Attitudes on usage of BBAs according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.3

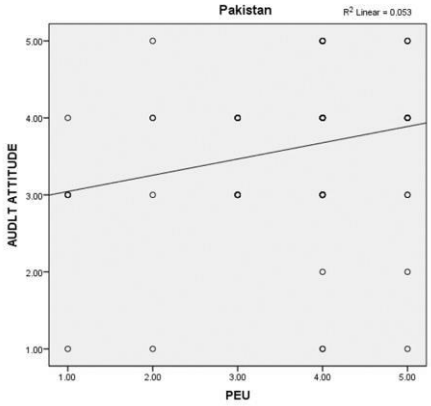
Table 5.2.3: Pearson correlation amongst PEU and ATT

		Pakistani		**Cypriot**		**Turkish**		**others**	
		PEU	**ATT**	**PEU**	**ATT**	**PEU**	**ATT**	**PEU**	**ATT**
PEU	Pearson correlation	1	.4477**	1	.2998**	1	.3902**	1	.568**
	Sig. (2-tailed)		0.000*		0.002		0		0
	N	116	116	77	77	89	89	126	126
ATT	Pearson correlation	.4477**	1	.2998**	1	. .3902**	1	.568**	1
	Sig. (2-tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .447 and p = .000 which shows that there is a weak positive correlation between Perceived Ease of Use and Attitudes, which is showing in following figure.

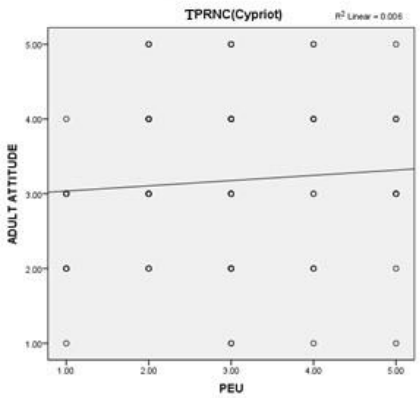


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.9: Scatter graph shows the relationship between PEU and ATT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on adults Attitude towards use of BBAs.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Perceived Ease of Use and Attitude, with r = .299, n=77 and p = .002. which is shown in following figure.

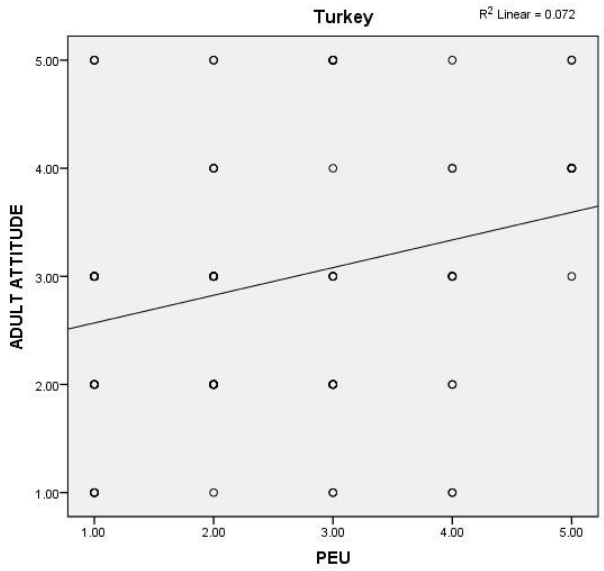


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.10: Scatter graph shows the relationship between PEU and ATT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on adults towards use of BBAs.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .390, n=89 and p = .000. which is shown in following figure

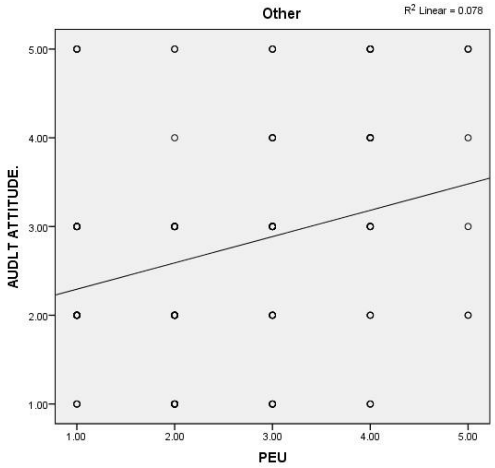


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.11: Scatter graph shows the relationship between PEU and ATT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on adults Attitude to use BBAs.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .568, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.12: Scatter graph shows the relationship between PEU and ATT other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on adults Attitude to use BBAs.

5.2.4 The Relationship among Perceived Ease of Use and Behavioral Intention

H4: A Perceived Ease of Use has a positive effect on Behavioral Intention to use BBAs.

In order to find out the relationship that exists between Perceived Ease of Use and Behavioral Intention on usage of BBAs among adults according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.4

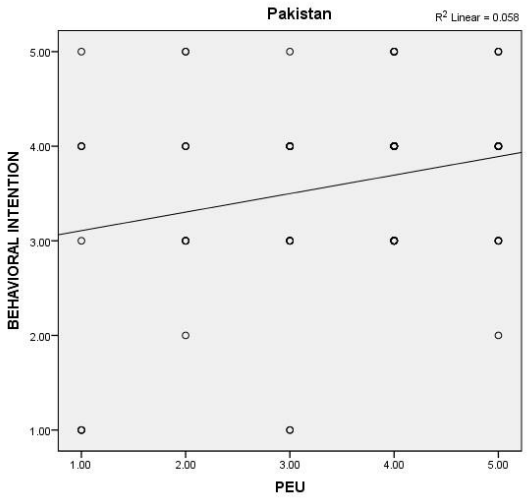
Table 5.2.4: Pearson correlation amongst PEU and INT

	Pakistani		**Cypriot**		**Turkish**		**others**	
	PEU	**INT**	**PEU**	**INT**	**PEU**	**INT**	**PEU**	**INT**
Pearson correlation	1	.435**	1	.250**	1	.367**	1	.653**

PEU	Sig. (2-tailed)		0.000*		0.002		0.003*		0
	N	116	116	77	77	89	89	126	126
	Pearson correlation	.435**	1	.250**	1	.367**	1	.653**	1
INT	Sig. (2-tailed)	.000**		0.002		0.003*		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .435 and p = .000 which shows that there is a weak positive correlation between Perceived Ease of Use and Behavioral Intention, which is showing in following figure.

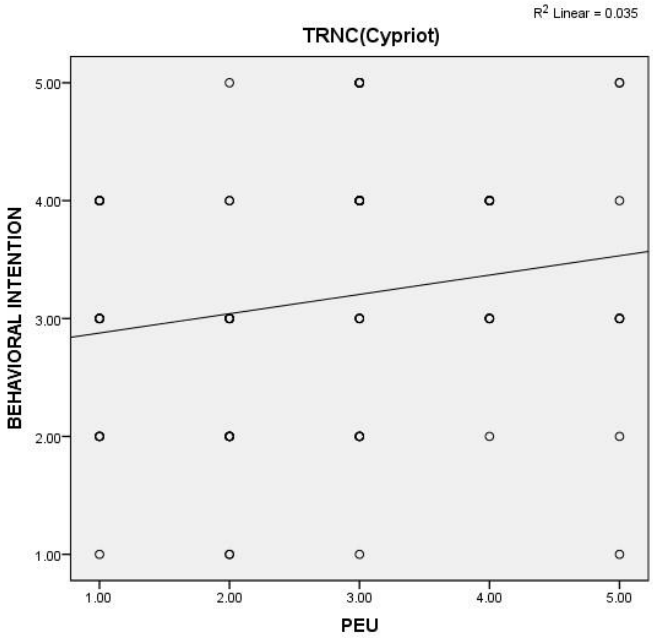


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.13: Scatter graph shows the relationship between PEU and INT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Perceived Ease of Use and Behavioral Intention, with r = .250, n=77 and p = .002. which is shown in following figure.

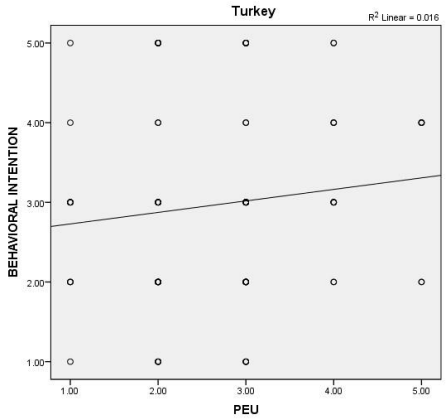


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.14: Scatter graph shows the relationship between PEU and INT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .367, n=89 and p = .003. which is shown in following figure

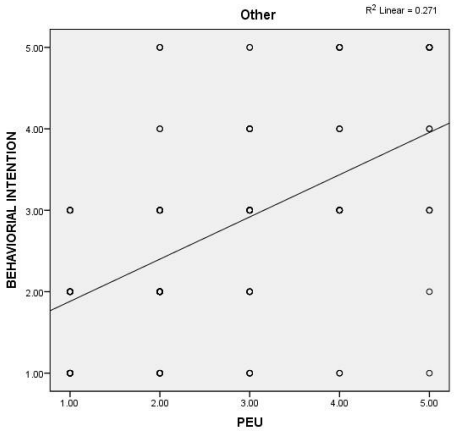


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.15: Scatter graph shows the relationship between PEU and INT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on Behavioral Intention towards use BBAs among adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .653, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.16: Scatter graph shows the relationship between PEU and INT other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Perceived Ease of Use have shown a considerable positive effect on Behavioral Intention to use BBAs among adults.

5.2.5 The Relationship among Perceived Risks and Attitude

H5: *A Perceived Risks has a Positive effect on adults Attitudes towards using BBAs.*

In order to find out the relationship that exists between Perceived Risks and adults Attitudes on usage of BBAs according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.5.

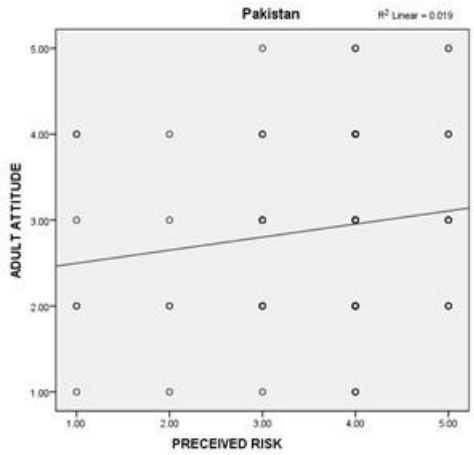
Table 5.2.5: Pearson correlation amongst PR and ATT

		Pakistani		**Cypriot**		**Turkish**		**others**	
		PR	**ATT**	**PR**	**ATT**	**PR**	**ATT**	**PR**	**ATT**
PR	Pearson correlation	1	.4263**	1	.4438**	1	.4133**	1	.6636**
	Sig. (2tailed)		.000*		0.002		0		0
	N	116	116	77	77	89	89	126	126
ATT	Pearson correlation	.4263**	1	.4438**	1	. 4133**	1	.6636**	1
	Sig. (2tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .426 and p = .000 which shows that there is a weak positive correlation between Perceived Risks and Attitudes, which is showing in following figure.

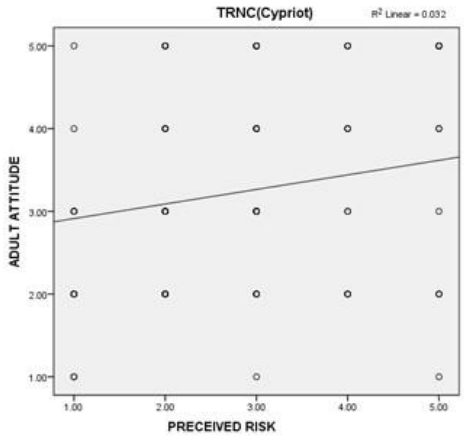


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.17: Scatter graph shows the relationship between PR and ATT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on adults Attitude towards use of BBAs.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Perceived Risks and Attitude, with r = .443, n=77 and p = .002. which is shown in following figure.

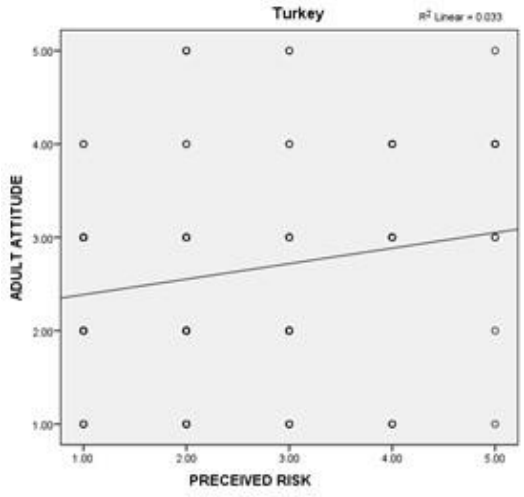


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.18: Scatter graph shows the relationship between PR and ATT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on adults towards use of BBAs.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .413, n=89 and p = .000. which is shown in following figure

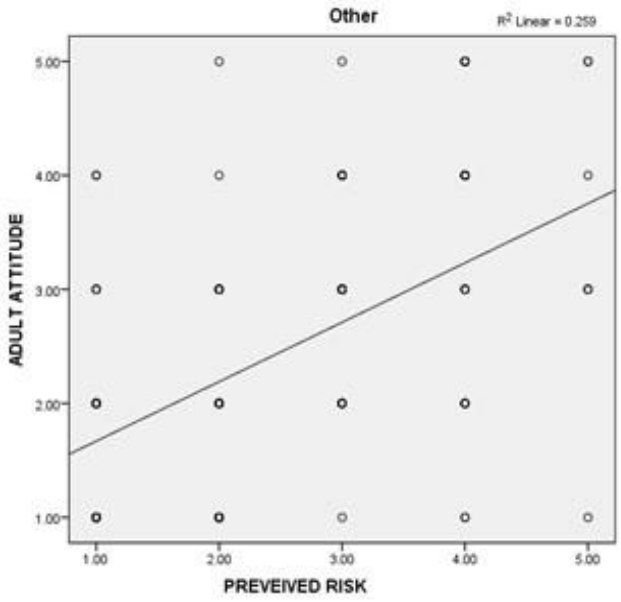


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.19: Scatter graph shows the relationship between PR and ATT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on adults Attitude to use BBAs.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .663, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.20: Scatter graph shows the relationship between PR and ATT other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on adults Attitude to use BBAs.

5.2.6 The Relationship among Perceived Risks and Behavioral Intention

H6: *A Perceived Risks has a positive effect on Behavioral Intention to use BBAs.*

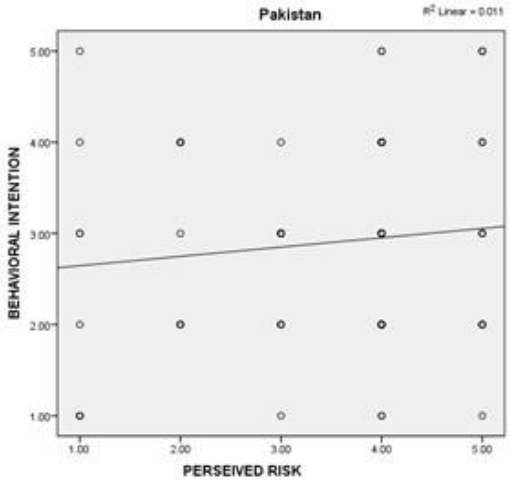
In order to find out the relationship that exists between Perceived Risks and Behavioral Intention on usage of BBAs among adults according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.6

Table 5.2.6: Pearson correlation amongst PR and INT

		Pakistani		Cypriot		Turkish		others	
		PR	**INT**	**PR**	**INT**	**PR**	**INT**	**PR**	**INT**
PR	Pearson correlation	1	.3498**	1	.3803**	1	.3998**	1	.6013**
	Sig. (2-tailed)	0.000*	0.000*		0.002	0.000*	0		0
	N	116	116	77	77	89	89	126	126
INT	Pearson correlation	.3498**	1	.3803**	1	.3998**	1	.6013**	1
	Sig. (2-tailed)	0.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .349 and p = .000 which shows that there is a weak positive correlation between Perceived Risks and Behavioral Intention, which is showing in following figure.

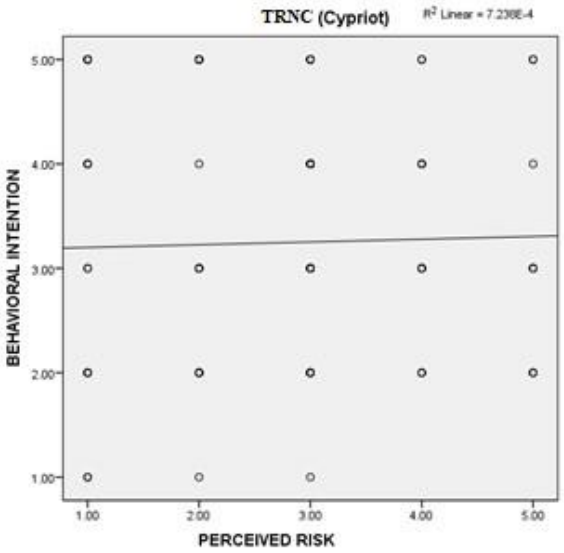


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.21: Scatter graph shows the relationship between PR and INT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Perceived Risks and Behavioral Intention, with r = .380, n=77 and p = .002. which is shown in following figure.

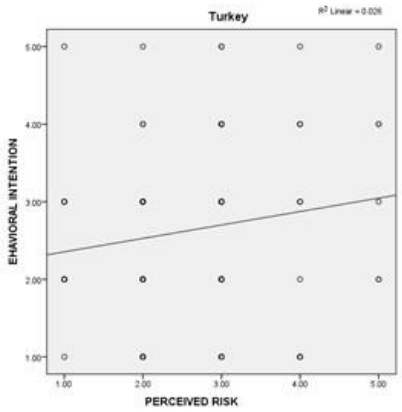


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.22: Scatter graph shows the relationship between PR and INT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .399, n=89 and p = .003. which is shown in following figure

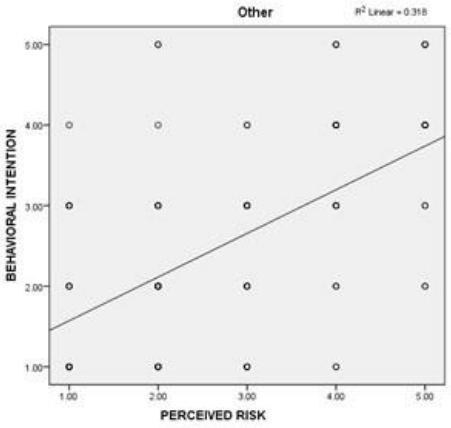


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.23: Scatter graph shows the relationship between PR and INT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on Behavioral Intention towards use BBAs among adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .601, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.24: Scatter graph shows the relationship between PR and INT other participants Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Perceived Risks have shown a considerable positive effect on Behavioral Intention to use BBAs among adults.

5.2.7 The Relationship among Social Influence and Perceived Usefulness

H2: *A Social Influence has a Positive effect on Perceived Usefulness to use BBAs*

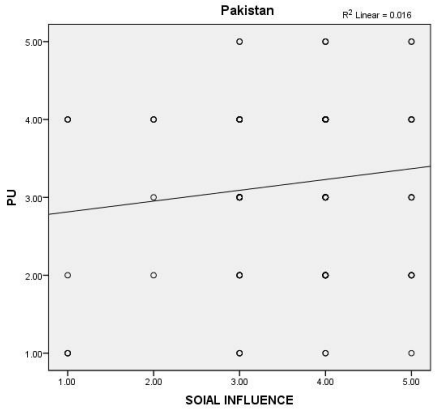
In order to find out the relationship that exists amongst Social Influence and Perceived Usefulness on usage of BBAs among adults according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.7.

Table 5.2.7: Pearson correlation amongst SI and PU

		Pakistani		**Cypriot**		**Turkish**		**others**	
		SI	**PU**	**SI**	**PU**	**SI**	**PU**	**SI**	**PU**
SI	Pearson correlation	1	.342**	1	.284**	1	.4821**	1	.5667**
	Sig. (2-tailed)		0.000*		0.002		0		0
	N	116	116	77	77	89	89	126	126
PU	Pearson correlation	.342**	1	.284**	1	. 4821**	1	.5667**	1
	Sig. (2-tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .342 and p = .000 which shows that there is a weak positive correlation between Social Influence and Perceived. Which is shown in following figure.

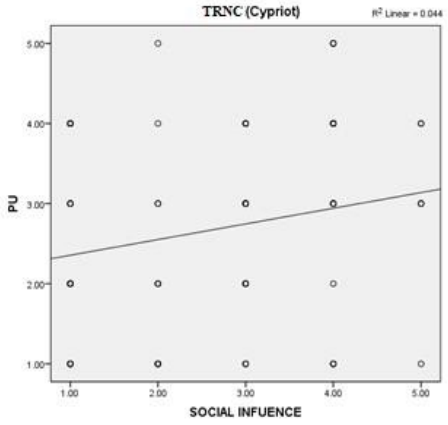


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.25: Scatter graph shows the relationship between SI and PU Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Social Influence and Perceived Usefulness, with r = .284, n=77 and p = .002. Which is shown in following figure.

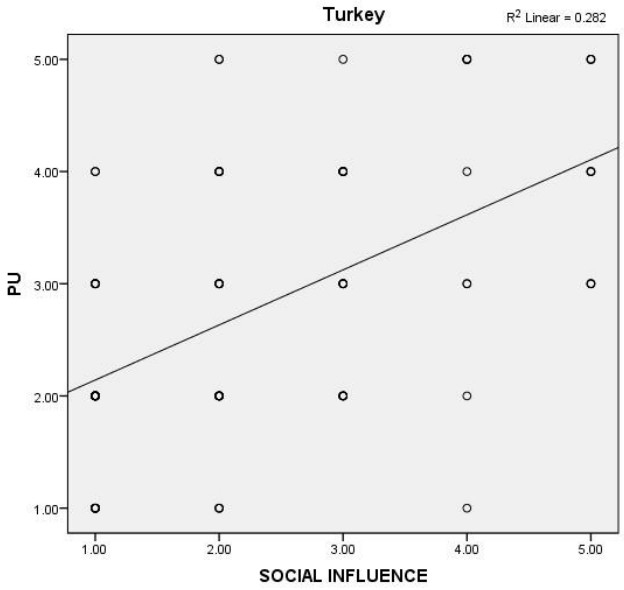


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.26: Scatter graph shows the relationship between SI and PU Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .482, n=89 and p = .000. Which is shown in following figure.

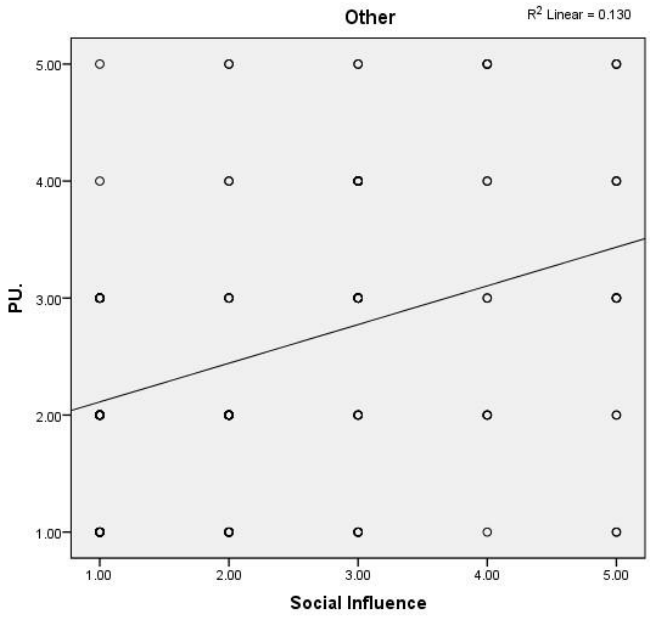


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.27: Scatter graph shows the relationship between SI and PU Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as “others” having a moderate positive correlation between the variables with values of r = .566, n=126 and p = .000. Which is shown in following figure.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.28: Scatter graph shows the relationship between PEU and PU other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect toward Perceived Usefulness of BBAs among the adults.

5.2.8 The Relationship among Social Influence and Attitude

H8: *A Social Influence has a Positive effect on adults Attitudes towards using BBAs.*

In order to find out the relationship that exists between Social Influence and adults Attitudes on usage of BBAs according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.8

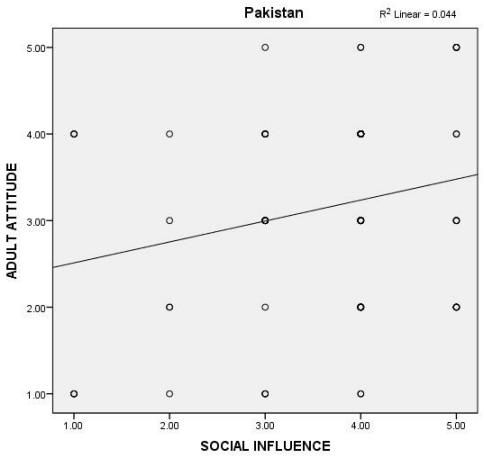
Table 5.2.8: Pearson correlation amongst SI and ATT

		Pakistani		Cypriot		Turkish		others	
		SI	**ATT**	**SI**	**ATT**	**SI**	**ATT**	**SI**	**ATT**
	Pearson correlation	1	.3805**	1	.3348**	1	.4235**	1	.6948**
SI	Sig. (2-tailed)		0.000*		0.002		0		0
	N	116	116	77	77	89	89	126	126
	Pearson correlation	.3805**	1	.3348**	1	. 4235**	1	.6948**	1
ATT	Sig. (2-tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = 380 and p = .000 which shows that there is a weak positive correlation between Social Influence and Attitudes, which is showing in following figure.

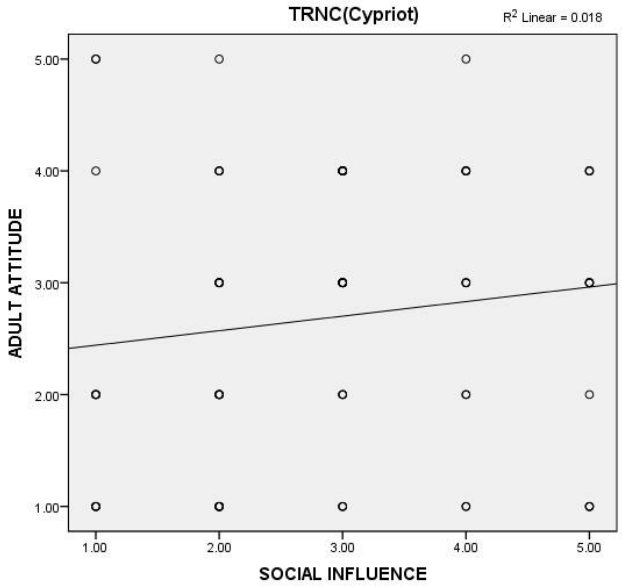


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.29: Scatter graph shows the relationship between SI and ATT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on adults Attitude towards use of BBAs.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Social Influence and Attitude, with r = .334, n=77 and p = .002. which is shown in following figure.

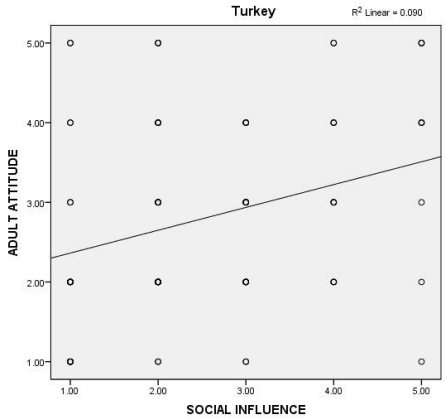


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.30: Scatter graph shows the relationship between SI and ATT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on adults towards use of BBAs.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .423, n=89 and p = .000. which is shown in following figure

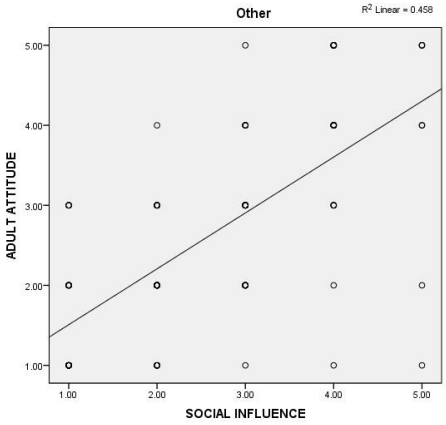


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.31: Scatter graph shows the relationship between SI and ATT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on adults Attitude to use BBAs.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .694, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.32: Scatter graph shows the relationship between SI and ATT other participants Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on adults Attitude to use BBAs.

5.2.9 The Relationship among Perceived Usefulness and Behavioral Intention

H9: *A Perceived Usefulness has a positive effect on Behavioral Intention to use BBAs.*

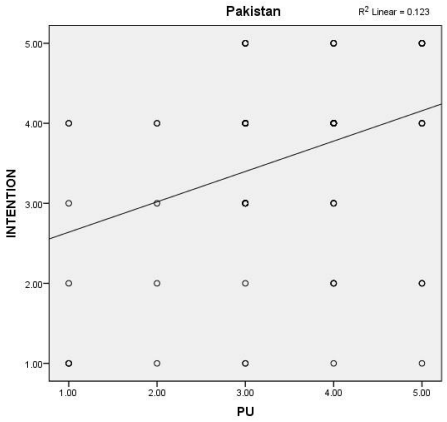
In order to find out the relationship that exists between Perceived Usefulness and Behavioral Intention on usage of BBAs among adults according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.9

Table 5.2.9: Pearson correlation amongst PU and INT

		Pakistani		**Cypriot**		**Turkish**		**others**	
		PU	**INT**	**PU**	**INT**	**PU**	**INT**	**PU**	**INT**
PU	Pearson correlation	1	0.3842**	1	.4547**	1	.541**	1	0.522**
	Sig. (2-tailed)				0.002				0
	N	116	116	77	77	89	89	126	126
INT	Pearson correlation	0.3842**	1	.4547**	1	.541**	1	.522**	1
	Sig. (2-tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .384 and p = .000 which shows that there is a weak positive correlation between Perceived Usefulness and Behavioral Intention, which is showing in following figure.

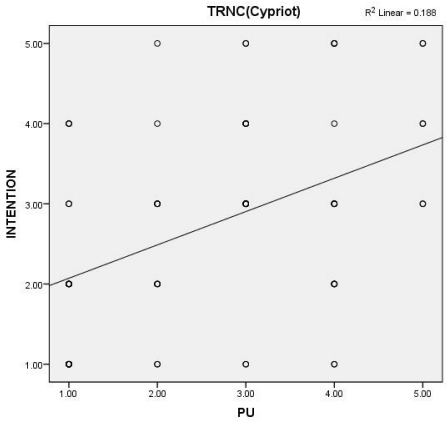


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.33: Scatter graph shows the relationship between PU and INT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Perceived Usefulness and Behavioral Intention, with r = .454, n=77 and p = .002. which is shown in following figure.

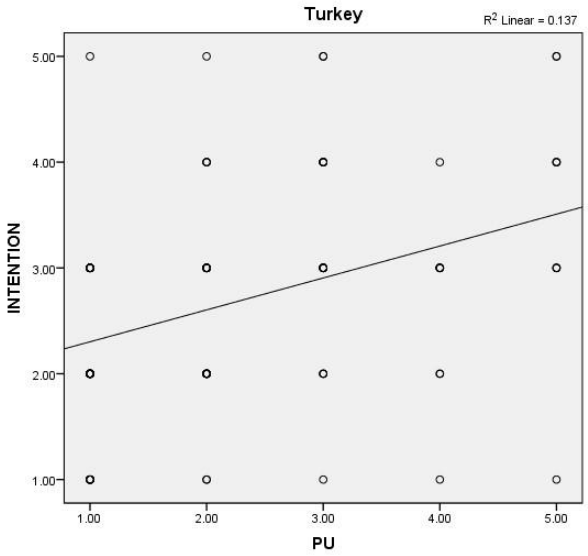


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.34: Scatter graph shows the relationship between PU and INT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Turkish: The results for Turkish participants have shown, a moderate positive correlation among the above-mentioned variables, the value of r = .541, n=89 and p = .003. which is shown in following figure

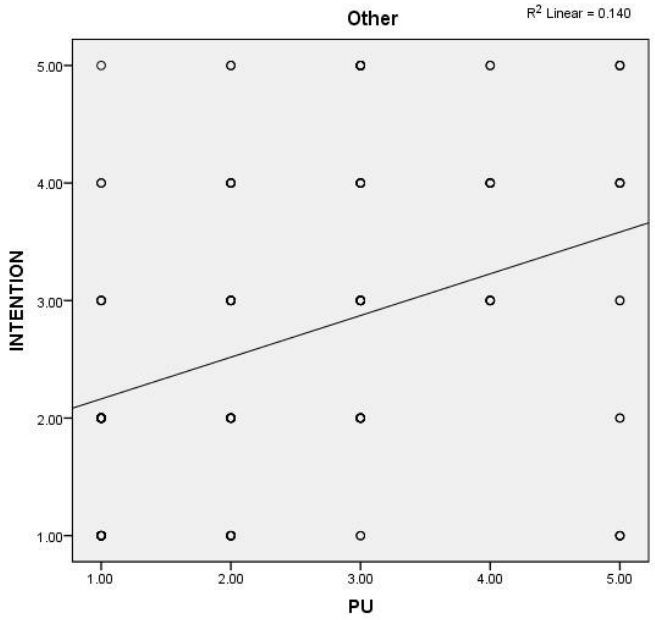


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.35: Scatter graph shows the relationship between PU and INT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on Behavioral Intention towards use BBAs among adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as “others” having a moderate positive correlation between the variables with values of r = .522, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.36: Scatter graph shows the relationship between PU and INT other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Perceived Usefulness have shown a considerable positive effect on Behavioral Intention to use BBAs among adults.

5.2.10 The Relationship among Social Influence and Behavioral Intention

H10: *A Social Influence has a positive effect on Behavioral Intention to use BBAs.*

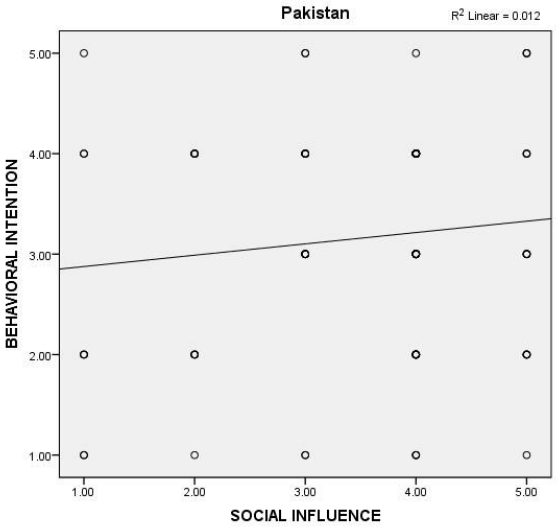
In order to find out the relationship that exists between Social Influence and Behavioral Intention on usage of BBAs among adults according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.6

Table 5.2.10: Pearson correlation amongst SI and INT

		Pakistani		Cypriot		Turkish		others	
		SI	**INT**	**SI**	**INT**	**SI**	**INT**	**SI**	**INT**
	Pearson correlation 1 .335** 1 .2945** 1 .4621** 1 .6171** **SI** Sig. (2-tailed) 0.000* 0.002 0.003* 0								
	Pearson correlation	.335**	1	.2945**	1	.4621**	1	.6171**	1
INT	Sig. (2-tailed)	0.000*		0.002		0.003*		0	
	N	116	116	77	77	89	89	126	126
	N	116	116	77 .29	77	89	89	126 .61	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .335 and p = .000 which shows that there is a weak positive correlation between Social Influence and Behavioral Intention, which is showing in following figure.

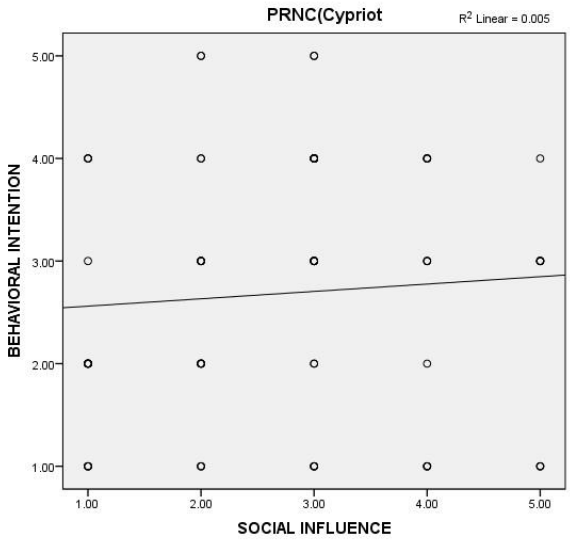


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.37: Scatter graph shows the relationship between SI and INT Pakistani participants

p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Social Influence and Behavioral Intention, with r = .294, n=77 and p = .002. which is shown in following figure.



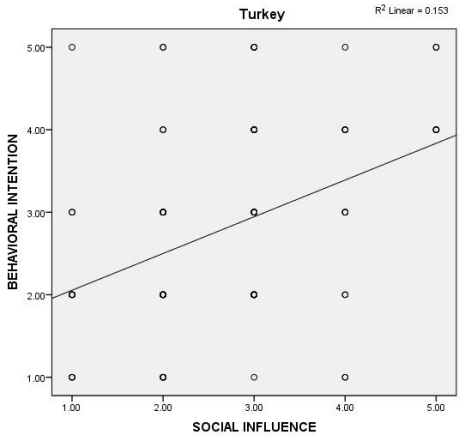
1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.38: Scatter graph shows the relationship between SI and INT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .462, n=89 and p = .003. which is shown in following figure

Since

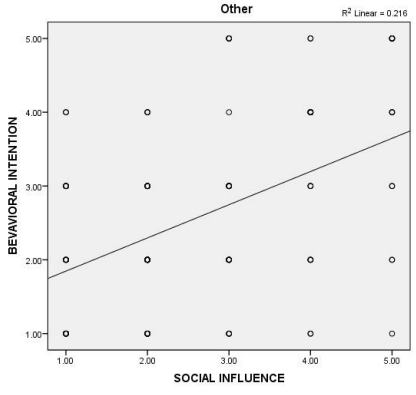


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.39: Scatter graph shows the relationship between SI and INT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on Behavioral Intention towards use BBAs among adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .612, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.40: Scatter graph shows the relationship between SI and INT other participants p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Social Influence have shown a considerable positive effect on Behavioral Intention to use BBAs among adults.

5.2.11 The Relationship among Benefits and Behavioral Intention

H10: *A Benefits has a positive effect on Behavioral Intention to use BBAs.*

In order to find out the relationship that exists between Benefits and Behavioral Intention on usage of BBAs among adults according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.11

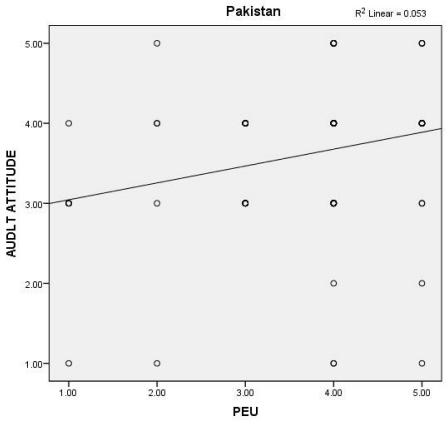
Table 5.2.11: Showing Pearson correlation amongst BEN and INT

		Pakistani		**Cypriot**		**Turkish**		**others**	
		BEN	**INT**	**BEN**	**INT**	**BEN**	**INT**	**BEN**	**INT**
BEN	Pearson correlation	1	.4396**	1	.3711**	1	.4895**	1	.6255**
	Sig. (2tailed)		0.000*		0.002		0		0.000
	N	116	116	77	77	89	89	126	126
INT	Pearson correlation	.4396**	1	.3711**	1	.4895**	1	.6255**	1
	Sig. (2tailed)	0.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .439 and p = .000 which shows that there is a weak positive correlation between Benefits and Behavioral Intention, which is showing in following figure.

Since

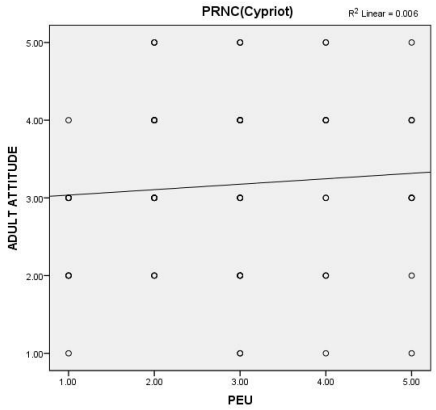


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.41: Scatter graph shows the relationship between BEN and INT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Benefits have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Benefits and Behavioral Intention, with r = .371, n=77 and p = .002. which is shown in following figure.

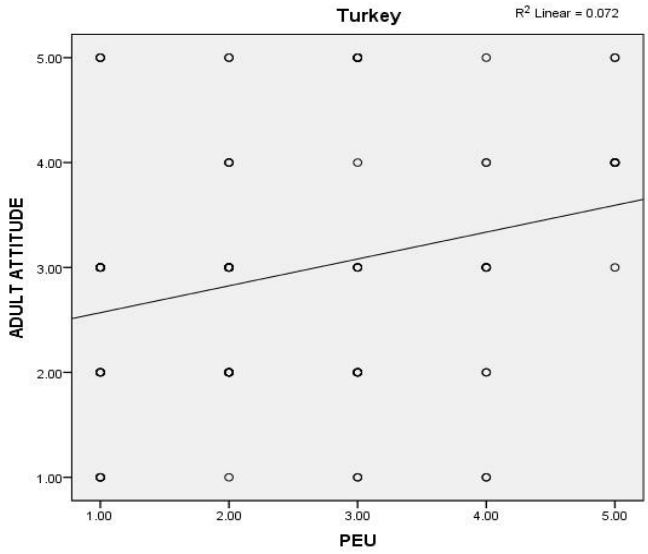


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.42: Scatter graph shows the relationship between BEN and INT Cypriot participants

p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Benefits have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .489, n=89 and p = .003. which is shown in following figure



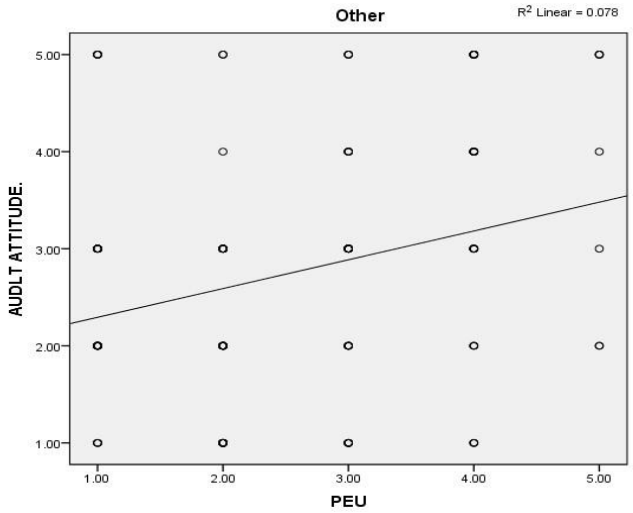
1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.43: Scatter graph shows the relationship between BEN and INT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Benefits have shown a considerable positive effect on Behavioral Intention towards use BBAs among adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as “others” having a moderate positive correlation between the variables with values of r = .625, n=126 and p = .000.

Since



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.44: Scatter graph shows the relationship between BEN and INT other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Benefits have shown a considerable positive effect on Behavioral Intention to use BBAs among adults.

5.2.12 The Relationship among Attitude and Behavioral Intention

H12: *An adult attitude has a positive effect on Behavioral Intention to use BBAs.*

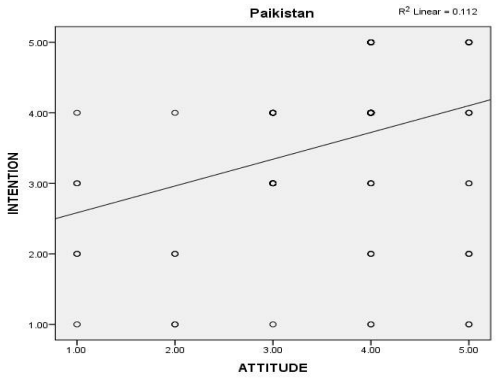
In order to find out the relationship that exists between Attitude and Behavioral Intention on usage of BBAs among adults according to nationalities i.e. Pakistani, Cypriots, Turkish and other nationals, a Pearson correlation was computed and result described according to nationalities shown in Table 5.2.12

Table 5.2.12: Pearson correla tion amongst ATT and INT

		Pakistani		Cypriot		Turkish		others	
		ATT	**INT**	**ATT**	**INT**	**ATT**	**INT**	**ATT**	**INT**
ATT	Pearson correlation	1	0.419**	1	.3532**	1	.4914**	1	0.5352**
	Sig. (2-tailed)				0.002				0
	N	116	116	77	77	89	89	126	126
INT	Pearson correlation	0.419**	1	.3532**	1	.4914**	1	.5352**	1
	Sig. (2-tailed)	.000**		0.002		0		0	
	N	116	116	77	77	89	89	126	126

** Correlation found at the 0.01 significance level (2-tailed).

Pakistan: Pakistani participants who were living in Northern Cyprus and participated in this study, the results showed that n= 116, r = .419 and p = .000 which shows that there is a weak positive correlation between Attitude and Behavioral Intention, which is showing in following figure.

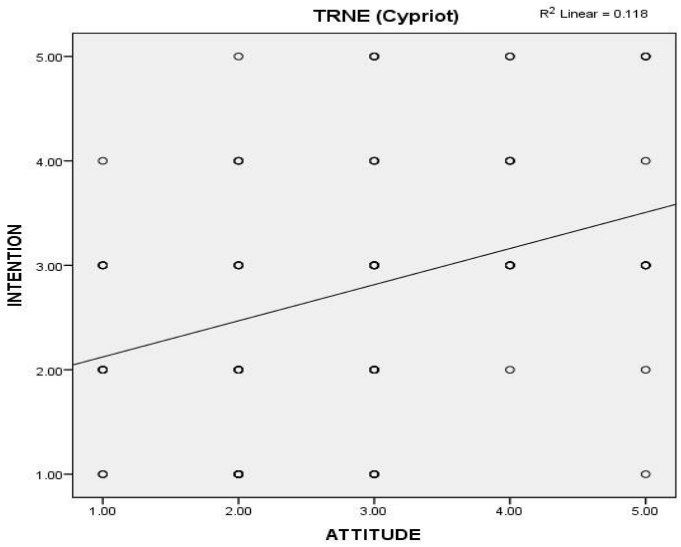


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.45: Scatter graph shows the relationship between ATT and INT Pakistani participants

Since p<=0.05 for Pakistani participants, therefore the hypothesis has been accepted and concluded that Attitude have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Cypriot: Second participants of Cypriot nationality and the results has shown a weak positive correction among the variables i.e. Attitude and Behavioral Intention, with r = .353, n=77 and p = .002. which is shown in following figure.

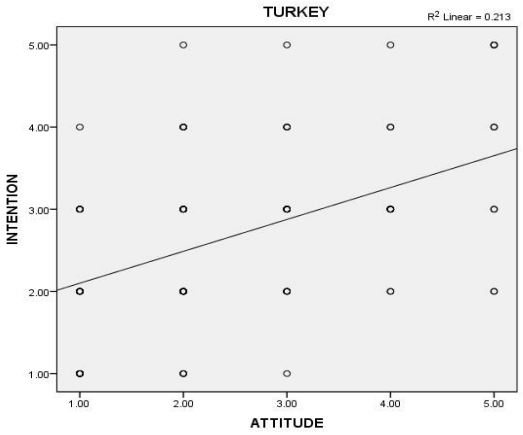


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.46: Scatter graph shows the relationship between ATT and INT Cypriot participants

Since p<=0.05 for Cypriot participants, therefore the hypothesis has been accepted and concluded that Attitude have shown a considerable positive effect on Behavioral Intention towards use of BBAs among adults.

Turkish: The results for Turkish participants have shown, a weak positive correlation among the above-mentioned variables, the value of r = .491, n=89 and p = .003. which is shown in following figure

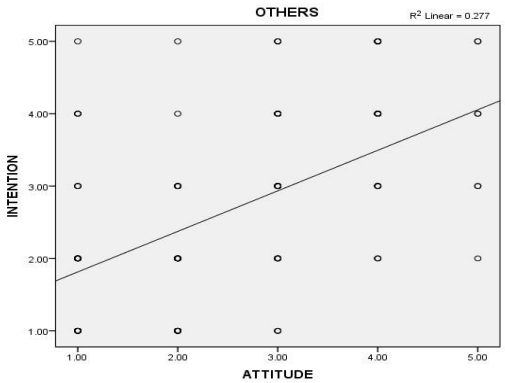


1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.47: Scatter graph shows the relationship between ATT and INT Turkish participants

Since p<=0.05 for Turkish participants, therefore the hypothesis has been accepted and concluded that Attitude have shown a considerable positive effect on Behavioral Intention towards use BBAs among adults.

other Nationals: The rest of participants of different nationalities who took part in this study which are labeled as "others" having a moderate positive correlation between the variables with values of r = .531, n=126 and p = .000.



1.00: Strongly Disagree; **2.00**: Disagree; **3.00**: Neutral; **4.00**: Agree; **5.00**: Strongly Agree

Figure 5.2.48: Scatter graph shows the relationship between ATT and INT other participants

Since p<=0.05 for other participants, therefore the hypothesis has been accepted and concluded that Attitude have shown a considerable positive effect on Behavioral Intention to use BBAs among adults.

5.2.13 Summary of Findings

The objective of this study is to investigate the factors that influence adults' intention to use BBAs. Second step in this study was to categorize the participants according to the highest number of participations. This step was done to make research more specific and stronger so research could find the more specific results. According to the participation Pakistani 116 participants, Cypriot 77, Turkish 89 and other nationals were 126.

As BCT is a new technology and its applications are not common in developing countries and Northern Cyprus is a developing country. The participants provided their opinions about the BCT and BBAs through the questions asked and through the results of that responses researcher found positive relationships among all variables of all hypotheses which are discussed below:

H1: For hypothesis 1, Pakistani participants and other nationals showed a moderate positive correlation. Cypriot and Turkish participants, variable relationship shown a weak positive correlation among PEU and PU. Therefore, the hypothesis is accepted.

H2: For hypothesis 2, Pakistani and Turkish participants showed a moderate positive correlation. Cypriot and participants of other nationals, variable relationship shown a weak positive correlation among PU and ATT. Therefore, the hypothesis is accepted.

H3: For hypothesis 3, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among PEU and ATT. Therefore, the hypothesis is accepted.

H4: For hypothesis 4, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among PEU and INT. Therefore, the hypothesis is accepted.

H5: For hypothesis 5, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among PR and ATT. Therefore, the hypothesis is accepted.

H6: For hypothesis 6, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among PR and INT. Therefore, the hypothesis is accepted.

H7: For hypothesis 7, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among SI and PU. Therefore, the hypothesis is accepted.

H8: For hypothesis 8, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among SI and ATT. Therefore, the hypothesis is accepted.

H9: For hypothesis 9, Turkish and participants of other nationals, variable relationship shown a moderate positive correlation. Pakistani, Cypriot, the correlation was a weak positive correlation among PU and INT. Therefore, the hypothesis is accepted.

H10: For hypothesis 10, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among SI and INT. Therefore, the hypothesis is accepted.

H11: For hypothesis 11, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among BEN and INT. Therefore, the hypothesis is accepted.

H12: For hypothesis 12, Pakistani, Cypriot and Turkish showed a weak positive correlation and for the and participants of other nationals, correlation was a moderate positive among

ATT and INT. Therefore, the hypothesis is accepted. Following figure summarized the correlation found between the variables of hypotheses.

Table 5.2.13: Summery of finding

Nationality	Hypothesis	IV	DV	Supported	Correlation Coefficient	R Value
PAKISTANI	H1	PEU	PU	YES	Moderate Positive	0.618
	H2	PU	ATT	YES	Moderate Positive	0.513
	H3	PEU	ATT	YES	Weak Positive	0.441
	H4	PEU	INT	YES	Weak Positive	0.435
	H5	PR	ATT	YES	Weak Positive	0.426
	H6	PR	INT	YES	Weak Positive	0.349
	H7	SI	PU	YES	Weak Positive	0.342
	H8	SI	ATT	YES	Weak Positive	0.380
	H9	PU	INT	YES	Weak Positive	0.384
	H10	SI	INT	YES	Weak Positive	0.335
	H11	BEN	INT	YES	Weak Positive	0.439
	H12	ATT	INT	YES	Weak Positive	0.419
CYPRIOT	H1	PEU	PU	YES	Weak Positive	0.293
	H2	PU	ATT	YES	Weak Positive	0.444
	H3	PEU	ATT	YES	Weak Positive	0.298
	H4	PEU	INT	YES	Weak Positive	0.250
	H5	PR	ATT	YES	Weak Positive	0.443
	H6	PR	INT	YES	Weak Positive	0.380
	H7	SI	PU	YES	Weak Positive	0.284
	H8	SI	ATT	YES	Weak Positive	0.334
	H9	PU	INT	YES	Weak Positive	0.454
	H10	SI	INT	YES	Weak Positive	0.294
	H11	BEN	INT	YES	Weak Positive	0.371
	H12	ATT	INT	YES	Weak Positive	0.353
TURKISH	H1	PEU	PU	YES	Weak Positive	0.381
	H2	PU	ATT	YES	Moderate Positive	0.535
	H3	PEU	ATT	YES	Weak Positive	0.390

	H4	PEU	INT	YES	Weak Positive	0.367
	H5	PR	ATT	YES	Weak Positive	0.413
	H6	PR	INT	YES	Weak Positive	0.390
	H7	SI	PU	YES	Weak Positive	0.482
	H8	SI	ATT	YES	Weak Positive	0.423
	H9	PU	INT	YES	Moderate Positive	0.541
	H10	SI	INT	YES	Weak Positive	0.462
	H11	BEN	INT	YES	Weak Positive	0.480
	H12	ATT	INT	YES	Weak Positive	0.491
other NATIONALS	H1 H2	PEU PU	PU ATT	YES YES	Moderate Positive Weak Positive	0.641 0.482
	H3	PEU	ATT	YES	Moderate Positive	0.568
	H4	PEU	INT	YES	Moderate Positive	0.653
	H5	PR	ATT	YES	Moderate Positive	0.663
	H6	PR	INT	YES	Moderate Positive	0.601
	H7	SI	PU	YES	Moderate Positive	0.566
	H8	SI	ATT	YES	Moderate Positive	0.694
	H9	PU	INT	YES	Moderate Positive	0.522
	H10	SI	INT	YES	Moderate Positive	0.617
	H11	BEN	INT	YES	Moderate Positive	0.625
	H12	ATT	INT	YES	Moderate Positive	0.535

CHAPTER 6 CONCLUSION AND RECOMMENDATIONS

In this chapter the researcher wind-up the study and concludes the study and outline the recommendations for future research based on the findings of this study.

6.1 Conclusion

This study explored the factors influencing adults' intention to use BBAs, with the help of an online questionnaire. The study was carried out in Northern Cyprus and adults of various

nationalities participated such as Pakistani, Cypriot, Turkish and other nationals. Based on the evaluated data the results were categorized into general and based-on nationalities, all the variables of TAM such as PEU, PU, SI, PR, BEN and ATT has got a positive impact on behavioral intention. For general results the hypotheses EU-PU, PU-INT, PR-ATT, SI-ATT, PU-ATT, BEN-INT and ATT-INT got a moderate positive impact on behavioral intention and the relationship PEU-ATT, PEU-INT, PR-INT, SI-PU and SI-INT got a weak positive impact on behavioral intention.

When collected data was evaluated based on nationality e.g. Pakistani national the relationship PEU-PU and PU-ATT has a moderate positive impact on behavioral intention. The other 10 hypotheses i.e. PR-ATT, SI-ATT, PU-ATT, BEN-INT, ATT-INT, PEU-ATT, PEU-INT, PR-INT, SI-PU and SI-INT has a weak positive impact on behavioral intention. Based on Cypriot all hypotheses have a weak impact on behavioral intention to use BBAs. Based on Turkish hypotheses PU-ATT and PU-INT has a moderate positive impact and the rest having weak positive impact on behavioral intention. Finally based on other nationals all the proposed hypotheses have a moderate impact except PU-ATT it has a weak positive impact on behavioral intention. Hence, the researcher concluded that the impact of TAM variable is positive on behavioral intention to use BBAs by adults.

6.2 Recommendations

Based on the findings of this research, following are some recommendations proposed by the researcher.

- In this study, the participants age group and profession were too broad because of online questionnaire, researchers on BCT should be done with specific age groups, professions to gain better idea about the popularity of BCT according to age group and profession. This will benefit in sense of business and many more.
- There is need to narrow/more specific the scope of research on BCT and its applications so that there will be an idea of the sector using or intend to use BCT.

- This study will benefit the researcher in the domain of BCT. It will contribute to the literature of BCT.

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APPENDICES

APPENDIX 1 QUESTIONNAIRE

FACTORS INFLUENCING ADULTS' INTENTION TO USE BLOCKCHAIN BASE APPLICATIONS (BBAs)

Dear Participant,

The questionnaire's aim is to investigate the factors that influence adults' intention to use BBAs. The participation is voluntarily, please be ensured that the provided information will be kept strictly confidential and will use only for academic purposes.

I would like to thank you for accepting my request to fill out this questionnaire which has been conducted to fulfil the thesis requirement for the master in Computer Information Systems at Near East University.

Anila Karim (Masters Student) 20176309@std.neu.edu.tr **Prof. Dr. Nadire Çavuş (Supervisor)** nadire.cavus@neu.edu.tr

BCT:

The Blockchain is a decentralized technology. A global network of computers uses BCT to jointly manage the database that records Bitcoin transactions. Blockchain can be used for tasks such as Asset Management, insurance, unconventional money lenders/ hard money lending, your car/ smartphone, (IoT), supply chain sensors, healthcare, passports, and personal identification and so on.

SECTION I: Personal Information

1. Gender: a) Female b) Male c) Prefer not to disclose

2. Age: a) Under 20 b) 21-30 c) 31-40
   d) 41-50 e) 51+

3. What is the highest level of education you have completed?

   a) Undergraduate or equivalent b) Postgraduate or equivalent
   c) PhD or equivalent d) other (Please specify) _____

4. What is your current employment status?

   a) Full-time employee b) Part-time employee c) Student
   d) Freelancer e) Unemployed/looking for work f) other_____

5. What is your nationality?
   a) Pakistani b) Cypriots
   c) Turkish d) other (Please specify)

SECTION II: Scale for the factors influencing adults' intention to use Blockchain base applications (BBAs). Please select the most suitable option.

Items	Strongly Agree (5)	Agree (4)	Neutral (3)	Disagree (2)	Strongly Disagree (1)
Perceived Usefulness:					
1. Using BBA's would enable me to accomplish my tasks more quickly.					
2. Using BBA's would improve my job performance.					
3. Using BBA's in my job would increase my productivity.					
4. Using BBA's would enhance my effectiveness on the job.					
Perceived Ease of Use:					
1. My interactions with BBA's would be clear and understandable.					
2. I would find BBA's to be flexible to interact with.					
3. It would be easy for me to become expert at using BBAs.					
4. I would find BBAs easy to use.					
Perceived Risk:					
1. I am afraid to use BBAs because of associated risks such as wrong input of account number or amount of money.					
2. BBAs creates fears about compensation of transaction failures.					
3. BBAs may not perform well and process payments incorrectly because of technical errors in the network.					
4. I would not feel save providing personal information over BBAs.					
5. I am worried to use BBAs because maybe other people able to access my account.					

6. Learning, how to use BBAs is time consuming task.					
Intention to Use:					
1. It is desirable for me to learn how to use BBAs.					
2. I would use BBAs for my banking needs.					
3. I will be comfortable to use it in the future.					
Benefits:					
1. I would prefer using BBA's because there is no third-party involvement.					
2. BBAs speed up the payment processes.					
3. BBAs increase the accuracy of the payment process.					
4. I feel safer using BBAs.					
5. BBAs are trustworthy.					
Social influence:					
1. I would like to use BBAs because my friends suggested me to use					
2. I would like to use BBAs because I learned about it through Social media for the first time.					
3. I would like to learn more about BBAs because Ads on social media are interesting and informative.					
Attitude					
1. I think the use of BBAs is a sensible idea.					
2. I am proud of being a user of different BBAs.					
3. I would suggest to use BBAs.					

APPENDIX 2 ETHICAL LETTER

Dear Anila Karim

Your application titled "**Factors influencing adults intention to use blokchain baseapplications**" with the application number YDÜ/FB/2019/59 has been evaluated by the Scientific Research Ethics Committee and granted approval. You can start your research on the condition that you will abide by the information provided in your application form.

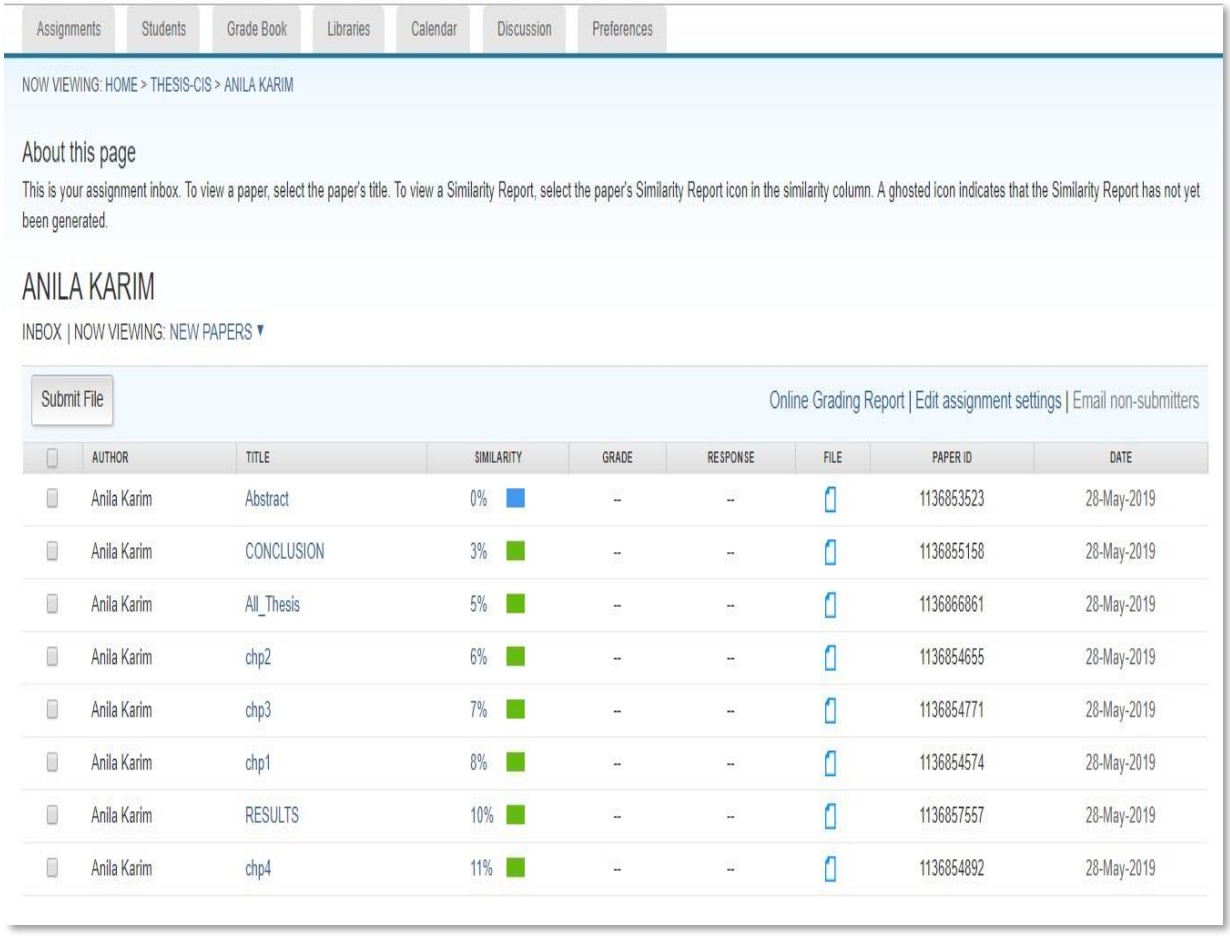
Assoc. Prof. Dr. Direnç Kanol

Rapporteur of the Scientific Research Ethics Committee

Direnç Kanol

Note: If you need to provide an official letter to an institution with the signature of the Head of NEU Scientific Research Ethics Committee, please apply to the secretariat of the ethics committee by showing this documen

APPENDIX 3
SIMILARITY REPORT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Anila Karim All_Thesis 5% -- -- 1136866861 28-May-2019
Anila Karim chp2 6% -- -- 1136854655 28-May-2019
Anila Karim chp3 7% -- -- 1136854771 28-May-2019
Anila Karim chp1 8% -- -- 1136854574 28-May-2019
Anila Karim RESULTS 10% -- -- 1136857557 28-May-2019
Anila Karim chp4 11% -- -- 1136854892 28-May-2019