Acceptance and use of Cryptocurrencies in Saudi Arabia:

A Case Study of Bitcoin

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Abstract

This study focused on the Unified Theory of Acceptance and Use of Technology (UTAUT2) and the possibility of its application, to determine the most important variables that affect users' acceptance of cryptocurrencies (especially Bitcoin). Determining the key factors that affect the acceptance and use of Bitcoin by adult individuals with basic knowledge of the Internet in Saudi Arabia.

The results showed that value of the adjusted R2 is 0.859, which indicates that the independent variables have the ability to explain 85.9% of the change in the dependent variable, there is significant and positive linear relationship between performance expectancy, effort expectancy, al shariah compliance, price value and behavioral intention to use Bitcoin in Saudi Arabia, There is no significant linear relationship between social influence and facilitating conditions toward the user's behavioral intention to use Bitcoin. There is a significant and negative relationship between perceived risk and the user's behavioral intention to use Bitcoin. It shows that many users still treat Bitcoin with care because there is no legal legislation and Bitcoin is still not compatible with Islamic trading perspective.

The research recommended the following:

1- The perceived risk of cryptocurrency transactions is very high, therefore policymakers in arab countries need to issue laws regarding the use of cryptocurrency and protect its users .

2- Factors that could be included in future research are legislation influence and sustainability of cryptocurrencies.

3- There should be more workshops or seminars about Bitcoin in order to educate people in Arab countries about its benefits. This kind of activities should be organized not only by government but also Bitcoin groups and forums.

Keywords: Cryptocurrencies, Bitcoin, Blockchain, TAM, UTAUT.

1- Introduction

Cryptocurrencies appeared in 2008 when Satoshi Nakamoto published paper entitled "Bitcoin: A Peer-to-Peer Electronic Cash System" (Nakamoto, 2008:1).

Arias-Oliva et al. (2019) described new technology which create real decentralized peer-to-peer monetary system, claiming that "a purely peer-to-peer version of electronic money would allow online payments to be sent directly from one person to another without intervention from any

financial institution".

E-commerce depends on financial and banking institutions to process electronic payments. While the system adequate for most transactions, it has some weaknesses, like: bank fees and the restrictions to perform currency exchanges. Customers and businesses are recognizing that trade limitations and traditional currency costs can be eliminated due to the advent of digital currencies such as Bitcoin (Mahomed, 2017:21).

In the Arab countries, Bitcoin is still in a early stages, where most countries do not allowed to use Bitcoin in investment or trading (Shetewy et al., 2019:1).

Saudi Central Bank is stating that Bitcoin and other virtual currencies are not legal currencies in Saudi Arabia. People are warned to be cautious when dealing with Bitcoin and other virtual currencies. The owner or user of Bitcoin and other virtual currencies bears all risks associated with their possession or use it (Saudi Central Bank, 2018). Also Saudi Central bank emphasized that investment or trading in virtual currencies carries a number of risks and bad consequences for dealers, like large losses in capital and fraud. The consequences due to the limited information available to investors on how to invest in those currencies, as well as the high volatility in the prices of those currencies and the risks of penetration (Saudi Central Bank, 2018). On January 1st 2017, the UAE Central Bank issued the «Regulatory Framework for Electronic Payment Systems» to ensure consumer protection and financial stability. And on February 1st 2017, the Governor of the UAE Central Bank issued a statement explaining that «the Regulatory Framework does not apply to Bitcoin or other cryptocurrencies», and added that cryptocurrencies are currently under review by the Central Bank. New regulations will be issued as appropriate based on evolution of concepts and adoption rates (Hoaula and Barbary, Feb. 2018).

Also individuals were warned from using Bitcoin in trading or purchasing online in many Arab countries like, Lebanon, Egypt, and Morocco (Shetewy et al.,

2019:1). In Egypt particularly, the Grand Mufti has been issued a fatwa prohibiting the use of Bitcoin in Financial or commercial transactions because it is incompatible with the Islamic-perspective (Allam, Dec., 2017:1).While Bitcoin still in a high-risk stage, there are many consumers who are desired to use it. So this study tries to find out what factors that affect Bitcoin adoption in Saudi Arabia, by using the Unified Theory of Acceptance and Use of technology (UTAUT2). So this study tries to find out what factors that affect Bitcoin adoption in Saudi Arabia, by using the unified theory of the acceptance of information technology (UTAUT2). Although some research has been done on Bitcoin, as the most widely used and important cryptocurrency today (Arias-Oliva et al., 2019), the literature on cryptocurrencies in Arab countries is scarce. Therefore, this study will be a new contribution to the literature.

1.1 Study Problem

As digitization has appeared, there has been a rise in the use of virtual currencies. Virtual currencies are similar to money in that they provide a unit of measurement, a medium of exchange, and a store of value. Virtual currencies do not depend on a central bank to issue it, a commercial bank to store it, or a credit card company to transfer it. Instead, users interact with each other directly and anonymously and without the need for third-party intervention (Njuguna, 2014:8).

Cryptocurrencies allow users to send and receive any amount of money quickly and securely from anywhere in the world at any time. Users of cryptocurrencies are not limited space or time when making payments, so the users have complete control of their money, and there are no or very low fees. In the case of Bitcoin, users may pay fees for transactions to get priority processing, which means transactions are confirmed faster by the network (Veja□ka, 2014:4). Despite the benefits of using cryptocurrencies, there are many consequences, including a lack of a regulatory framework protecting consumers, price fluctuations and risks of fraud. Furthermore,

many people are concerned about the absence of control, as well as the finality and irreversibility of Bitcoin transactions (Njuguna, 2014:10).

The problem of the study is the weak acceptance and use of cryptocurrencies by individuals in Saudi Arabia, as individuals› fear of the many risks that they may be exposed to. Also, the vast controversy around acceptance or rejecting Bitcoin from the perspective of Islamic rules. The reason for this view of, the cryptocurrencies is the consumer lack of confidence in this technology despite the many benefits that it brings from saving time, money and effort. Therefore, this study came to determine the factors that affect Acceptance and Use of Bitcoin in Saudi Arabia. The main questions are:

1- Do customers use Bitcoin or do customers intend to use it in the future?

2- What are the reasons for using or having an intention of using Bitcoin?

3- What are the factors that affect the user's behavioral intention to use Bitcoin in Saudi Arabia?

1.2 The Objectives of the study

The study aims to achieve the following objectives:

- Learning about the concepts of cryptocurrencies, types, features, advantages and disadvantages.

- Knowing the reasons to use Bitcoin in Saudi Arabia.

- Determining the main factors that affect the users' behavioral intention to use Bitcoin in Saudi Arabia.

- Drawing results and recommendations that benefit consumers and investors for giving them confidence in the use of Bitcoin.

1.3 The siginfance of the study

Theoretical significance:

The study examines the interpretation of the use of crypto currencies according to the Unified Theory of Acceptance and Use of Technology (UTAUT2), as it is considered one of the primary studies that was introduced the Sharia Compliance factor as a strong influence on the acceptance of the use of Bitcoin in Islamic countries additionally to the main factors in the proposed model.

Practical significance

This study is expected to contribute to the following:

• This study is hoped to help the relevant authorities (central banks, Sharia scholars) to develop future laws and rules to encourage the use of crypto-currencies, which will help increase the acceptance of the use of these currencies.

• Users: The results of the study will help users to know the factors that affect acceptance of cryptocurrencies and thus help them to choose currencies that are compatible with their orientation and the monetary laws and policies applied in their countries.

1.4 Study Limits

• Objectivity limits: This study will investigate the factors that affect behavioral intention to accept and use of cryptocurrencies from a consumer/ or investor point of view(Bitcoin as a case study)

• Spatial limits: Burydah and Onaizah city, Emirate of Qassim, Saudi Arabia.

• Human limits: Adult individuals who have a good knowledge of the internet and financial technology.

• Time limits: The field study was conducted from Aug. 2021 to Oct. 2021.

1.5 Terminology

Technology Acceptance Model (TAM) is derived from Theory of Reasons Actions (TRA) explains the motivation of users by three factors; perceived usefulness, perceived ease of use, and attitude toward use (Taherdoost, 2017:962).

Users can either buy virtual currencies with «real» money at a predetermined exchange rate or got them by participating in community activities (Peng, 2013:12).

Virtual currencies are digital currencies by using real money at a pre-determined exchange rate or got by users who owned it (Peng, 2013:12).

A cryptocurrency is a digital record of ownership of nominal balances that can be used to pay for transactions. For any transaction, the buyer gives instructions to transfer ownership of a certain amount of his balances to the seller (Chiu and

Koepp, 2018:21).

Bitcoin is a smart scheme to make payments on the Internet without paying fees (Rogojanu and Badea, 2014:12).

Blockchain as a transaction-based ledger that records the transfers of cryptocurrency balances throughout time (Chiu and Koepp, 2018:21).

Electronic payment systems are a sort of inter-organizational information that links transaction systems, numerous associations, and individual clients. Technology and the environment among partners are required for complicated interaction (Fatonah et al., 2018:2).

Al Shariah is one of the most important sources of religious legislation in the Arab world for regulating and operating financial operations (Shetewy et al., 2019:155).

2- Literature Review and Theoretical Framework
2.1 Literature Review
2.1.1: Studies about Technology Acceptance Models to use crptocurrencies

(**Arias-Oliva et al., 2019**) proposed a new model to analyze the main factors for adopting cryptocurrencies from a consumer-behavior perspective in Spain. The new model based on UTAUT model and added two factors (Perceived Risk and Financial Literacy). The results showed that the factors with the greatest explanatory power for an individual investor's intention to use cryptocurrencies are Performance Expectancy (explained 68.45% of the variance in the intention to use) and Facilitating Conditions (14.81%). Effort Expectancy also had significant explanatory power, but the influence was smaller (4.99%). The factors Social Influence, Perceived Risk, and Financial Literacy) did not have a significant influence on the intention to use cryptocurrencies

(**Rodenrijs and Wokke, 2018**) aimed to explain the effects of social media usage on the consumer acceptance of cryptocurrency. They proposed a new model containing factors: Perceived Usefulness and Perceived Ease of Use from Technology Acceptance Model (TAM), and added social media factors: Internalization, Identification and Compliance. The results showed that perceived usefulness and internalization are significant contributors to an individual's attitude towards using and intention to engage in cryptocurrency. Compliance and Perceived Ease of Use are not a significant contributor to using cryptocurrency. Identification only has a significant contribution when the influence of an individual's attitude is excluded to predict behavioral intention.

(**Mahomed, 2017**) used the UTAUT2 model in order to analyze the factors that impact consumer-behavior adoption of the technology. A conceptual model is built through a review of the technical aspects of cryptocurrency and technology adoption theory. The study population consisted of students of various levels of education in South Africa. The study showed many results, such as: facilitating conditions has the highest explanatory effect on actual usage of cryptocurrency, behavioral intention was predicted most strongly by hedonic motivation, followed by perceived trust, and social influence. Effort Expectancy and Performance Expectancy are not significant. Investment was the primary reason to use cryptocurrencies.

(**Kumpajaya and Dhewanto, 2015**) proposed a model to study the acceptance of Bitcoin in Indonesia. The new model depended on Technology Acceptance Model (TAM) by Davis (1989) and perceived compatibility from Innovation Diffusion Theory by Everett Rogers (1962). Also, they added knowledge and perceived risk as additional external variables for TAM. The findings were that perceived usefulness and perceived ease-of-use are positively significant towards intended use of Bitcoin. knowledge regarding Bitcoin and user compatibility was important for Bitcoin acceptance in Indonesia.

(**Schuh and Shy, 2015**) aimed to explain awareness, adoption, and use of Bitcoin and other virtual currencies in the United States. They used the Survey of Consumer Payment Choice (SCPC) from the Federal Reserve Bank of Boston (20082015-) to

put in statistics and proposed econometric models. The results showed that information about Bitcoin and other virtual currencies still had only reached about half of the U.S. adult population by the end of 2015. Men and consumers with high incomes and education appeared to be more aware of virtual currencies.

(**Njuguna, 2014**) aimed to find out the impact of digital currencies on e-commerce in Kenya, the challenges of adopting Bitcoin as a digital currency in Kenya. The study had many results, such as: the use of Bitcoin reduces the cost of international funds transfers as compared to traditional funds transfer services like Western Union and PayPal. The biggest challenge facing Bitcoin currency adoption understood how to use it. Also, the Central Bank of Kenya Act does not issue rules to regulate using Bitcoin.

2.1.2 Studies About Technology Acceptance in Different Areas

(**Saparudin et al., 2020**) examined the factors that influence the customer›s intention to use m-banking. They used the UTAUT model and added a new factor (trust). Data was collected through a study instrument (questionnaire) which was distributed to 243 participants in Jakarta. The study results showed that the proposed model could explain the intention to continue using m-banking by 73%. There was a significant relationship between performance expectancy, effort expectancy, social influence and trust with behavioral intention toward using m-banking. The Effort Expectancy is the factor that most influences the intention to use m-banking in Indonesia.

(**Sarfaraz, 2017**) used the UTAUT model to investigate the factors that influence Jordanian individuals› intention toward mobile banking. The study concluded that performance expectancy, effort expectancy and risk perception have significantly influenced user›s intention to adopt mobile banking services. There were no significant relations by social influence and trust on intention to use mobile banking services.

(**Isradila and Indrawati, 2017**) used the UTAUT 2 model to analyze factors that have an effect on using online transportation technology in Indonesia. The result showed that Habit, Hedonic Motivation, and Performance Expectancy influenced the Behavioral Intention on the adoption of online transportation technology in Indonesia by 58.07%. The factors that influence Use Behavior were Habit, Facilitating Condition, and Behavioral Intention by 46.15%.

(**Raeisi and Behboudi, 2016**) used the UTAUT model to analyze the factors that influence user's intention to use information technology in the cement industry in Iran. The study was conducted according to data collected in the first half of 2014 from a sample consisting of 86 directors and experts of four cement factories in Qeshm, Ardestan, Darab and Kerman. The results revealed that Effort Expectancy and Social Influence factors had a significant correlation with the users› intention of using technologies. There was a significant correlation between Facilitating Conditions and use behavior. The UTAUT model is the best model for anticipating the behavioral intention and Use Behavior in IT systems adoption in Iran.

(**Oliveira and Popovič, 2014**) proposed a new model to explain customers' intention to adopt and use Internet banking. The new model included the UTAUT model factors and added Perceived Risk factor. The results showed that Perceived Risk increased the predictive power of the UTAUT model in explaining the intention to use Internet banking. Performance Expectancy (PE), Effort Expectancy (EE), and Social Influence (SI) had positive and statistically significant behavior towards using Internet banking. The effect of Facilitating Condition (FC) was not significant. The proposed UTAUT+PCR model explains the usage behavior variance by 81%.

(**Skoumpopoulou et al, 2014**) used the UTAUT model to examine the factors that influence IT acceptance in two Higher Education Institutions (an HEI in Hong Kong and another in the United Kingdom) and investigated the differences between the two

institutions. The results showed that the staff at both universities had a high Behavioral Intention (BI) to use new technologies in the workspace. There was no significant difference between the two universities in adopting IT, which meant these dimensions had no effect on the staff who worked at these universities.

Alwahaishi and Snásel (2013) proposed a new model to identify the factors affecting the acceptance and use of the mobile Internet -as an ICT application in Saudi Arabia. The proposed model incorporates eight factors: performance expectancy (PE), effort expectancy (EE), social influence (SI), facilitating condition (FC), perceived value, perceived playfulness, attention focus, and behavioral intention. The results showed that all proposed factors affecting end users› adoption of the mobile Internet in Saudi Arabia. The academic qualification of respondents was the highest in college graduates by 53.4%, and the majority of them were students by 46.6%.

Ayele and Sreenivasarao (2013) proposed a new model (SO-UTAUT) to investigate the determinant factors that affect the acceptance and use of e-library services in India. The SO-UTAUT model has been empirically tested and proved that it could predict the acceptance and use of e-library services in universities. The results showed that performance expectancy factor was the most significant determinant factor (the highest positive contributor, 36.2%) in explaining users' intention to use e-library services. There was no significant difference in awareness of e-library services between academic staff and postgraduate students at the universities.

2.1.3 Comment on previous studies

• This study is consistent with (Arias-Oliva et al, 2019) and (Mahomed, 2017) who used the Unified Theory of Acceptance and Use of Technology (UTAUT) to analyze the factors affecting the acceptance and use of cryptocurrencies. Also, this study is consistent with (Rodenrijs and Wokke, 2018) (Kumpajaya and Dhewanto, 2015), who

proposed new models (based on the TAM model) to analyze the factors affecting the acceptance and use of cryptocurrencies.

• This study is consistent with the study of each (Saparudin, 2020), (Sarfaraz, 2017), (Isradila and Indrawati, 2017), (Raeisi and Behboudi, 2016), (Oliveira and Popovi , 2014), (Skoumpopoulou et al., 2014), (Alwahaishi and Snásel, 2013), (Ayele and Sreenivasarao, 2013) who used the Unified Theory of Acceptance and Use of Technology (UTAUT) to analyze the factors affecting the acceptance and use of technology but differs with them in the field of applying technology. Their studies apply models in fields like mobile banking, use information technology in universities, electronic libraries and electronic transportation services.

• While doing the literature review, there were no articles related to analyze factors that influence the behavioral intention to use cryptocurrencies in Arab countries.

• The previous studies were reviewed and helped to define the field of study, set questions and hypothesis, choose the methodology and study population, design the questionnaire, and define the conceptual framework for the study.

2.2 Theoretical Framework
2.2.1 Theories about Acceptance and Use of Technology

In Information Technology and Information System (IT/IS) research, many theories are used to explain user's intention to use new technologies, like: (Alwahaishi and Snásel, 2013:5) and (Lia, 2017:2)

• Theory of Diffusion of Innovations (DIT) (Rogers, 1995) that started in 1960.

• Theory of Task-technology fit (TTF) (Goodhue, and Thompson, 1995).

• Theory of Reasonable Action (TRA) (Fishbein and Ajzen, 1975).

• Theory of Planned Behavior (TPB) (Ajzen, 1985, 1991).

• The Motivational Model (Davis, Bagozzi & Warshaw, 1992).

• Decomposed Theory of Planned Behaviour,

(Taylor and Todd, 1995).

• Technology Acceptance Model (TAM) (Davis, Bogozzi and Warshaw, 1989), Final version of Technology Acceptance Model (TAM) Venkatesh and Davis (1996).

• Technology Acceptance Model 2 (TAM2) Venkatesh and Davis (2000).

• Unified Theory of Acceptance and Use of Technology (UTAUT), Venkatesh, Morris, Davis and Davis (2003).

• Technology Acceptance Model 3 (TAM3) Venkatesh and Bala (2008).

• Venkatesh, Thong, and Xu (2012) proposed and tested UTAUT2, which incorporates new constructs (i.e., hedonic motivation, price value, and habit).

2.2.2 Unified Theory of Acceptance and Use of Technology (UTAUT2)

About a decade ago, Venkatesh et al (2003) compiled these models into the unified theory of acceptance and use of technology (UTAUT). UTAUT determines four main factors (i.e., performance expectancy, effort expectancy, social influence, and facilitating conditions) and four moderators (age, gender, experience, and voluntariness) related to predicting behavioral intention to use a technology and actual technology use primarily in organizational contexts. According to UTAUT, performance expectancy, effort expectancy, and social influence were developed and found to impact behavioral intention to use technology, while behavioral intention and facilitating conditions determine technology use. Recently, Venkatesh, Thong, and Xu (2012) proposed and tested UTAUT2, which includes new factors (i.e., hedonic motivation, price value, and habit that focus on the new theory in a consumer context) and three moderators (age, gender, experience). The UTAUT2 model has power to explain 74% of the variance in consumers' behavioral intention to use a technology and 52% of the variance in consumers' technology use (Venkatesh et al., 2016:329).

The following figure explains the UTAUT2 model:
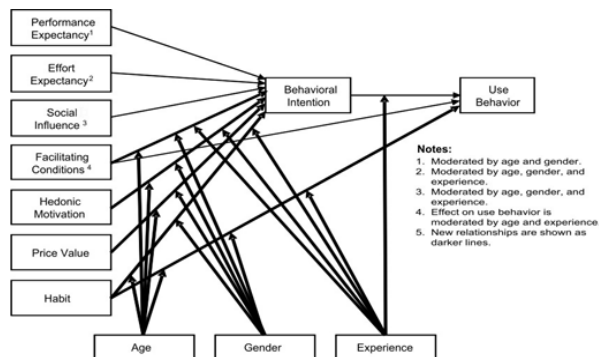
Figure (1)
UTAUT2 Model
Source: (Venkatesh et al., 2012)

2.2.3 Concepts of Bitcoin
2.2.3.1 Bitcoin definitions

Bitcoin is a type of digital currency in which encryption techniques are used to regulate the generation of Bitcoins and verify the transfer of funds. It does not depend on any central bank and is defined as "the first decentralized virtual currency"(Naware, 2016:1732).

Bitcoin is an electronic payment system which is based on cryptographic proof. This payment system does not have a single administrator. Bitcoin is also defined as a virtual currency, crypto-currency or digital currency (Kapil, 2014:1).

The invention of Bitcoin was intended to be used as an alternative type of money that individuals could use to deal with each other without the interference of authorities and central banks (Lo and Wang, 2014:3)..

From the previous definitions, Bitcoin can be defined as a cryptocurrency or decentralized virtual currency, which offers lower transaction fees than traditional online payment. Consumers could use it for electronic payment, investment or trading, but not many organizations and stores accept Bitcoin yet and some Arab countries have banned it.

2.2.3.2 Bitcoin Features Macwan (July, 2020); Omelchuk, et al (March, 2021)

• Decentralization: Bitcoins are not issued or back by any banks or governments. This makes

cryptocurrencies theoretically immune to any government interference or manipulation.

• Encryption: files are created using an equivalent method to cryptography (the science of hiding information), which makes it nearly impossible to counterfeit.

• Fast: Sending money from one side of the world to another side of the world is a matter of just a few minutes if sent in the form of Bitcoin.

• Liquidity: it can be quickly exchanged for cash without significant loss of its value.

• Portable. Any transaction can be made in a few minutes from different angles of the planet.

• Bitcoins, on the other hand, can be verified with absolute mathematical certainty.

• A currency that is traded over the Internet, and does not have a physical presence on the ground.

• Their quantity is limited, as each new Bitcoin is issued on a regular and predictable schedule.

• Global: anyone in the world can use it.

2.2.3.3 Advantages of Bitcoin: (Kapil, 2014:4)

• Transparent: All information about Bitcoin transactions is available on the blockchain for anyone to review and use. No individual or country can control the Bitcoin protocol because it is secure cryptographically.

• Secure: Bitcoin users are in complete control of their transactions that take place without personal information being linked to the transaction. This provides strong protection against identity theft. Bitcoin users can also protect their money with encryption and keep a backup.

• Low risk for users: Bitcoin transactions are irreversible, secure and do not contain sensitive or personal customer information, so they protect users from losses due to fraud.

• 24 Hours Payment: An individual can send and receive any amount of money instantly anywhere in the world at any time. No bank vacations, no forced limits.

• Low Fees: There are little or no fees for Bitcoin payments

2.2.3.4 Disadvantages of Bitcoin: (Kapil, 2014:4)

• Acceptance level: Although more users accept

Bitcoin around the world to gain its advantages, its acceptance is small and requires a lot of demand to get its advantages.

• Under development: Bitcoin software has few features. So new features and tools are being developed to make Bitcoin safer and more users can access it easily.

• Risks involved: Bitcoin has higher risks because there is a limited amount of Bitcoin and the demand for it is constantly increasing. In addition, the price of Bitcoin changes every day.

• Lack of awareness: Individuals are unaware of Bitcoins and need to know more about Bitcoin to use it more.

2.2.3.5 Disadvantages of Bitcoin from the perspective of the religious Dimension (Al Shariah) (Adam, 2017), (Hussain, 2021) and (Abu Bakar et al., 2017)

• Bitcoin has no physical currency but only numbers are recorded on a Blockchain network.

• It is used for speculation, so Bitcoin is not actual money.

• Bitcoin is compliant with unconfirmed cases and there is no high risk (gharar), which is refused under Islamic trading rules. So, Bitcoin is not acceptable from an Islamic perspective.

• Bitcoin is not acceptable because of the fact that there is not a regulatory framework on the working mechanism of Bitcoin, and it is fully encrypted in the network, which leads to useless outcomes for users.

• It includes interest (riba) - interest is forbidden in Islam.

• Bitcoin trading is considered a type of maysir, speculative investment is similar to gambling and is not acceptable by Al Shariah Scholars.

It is clear from the above that Bitcoin has many advantages, such as fast and secure transactions, low fees, but there are also several disadvantages, such as the risks of fraud and theft, and the possibility of using it in illegal transactions. Also, Bitcoin is unacceptable to Al Shariah Scholars.

2.2.3.6 Different Types of Crytocurrenices:

There are many types of cryptocurrencies other

than Bitcoin, like Litecoin (LTC), Ethereum (ETH), Zcash (ZEC), Dash (DASH), Ripple (XRP) and Monero (XMR) (Neethidevan, 2019:3637-).

Shariah-Compliant Cryptocurrency Types

There are many types of cryptocurrencies which are compatible with Al Shariah, like: OneGram cryptocurrency, NoorCoin, ADAB, Bayan (Aliyu et al, 2021: 2335-).

3- Method and procedures

3.1 Hypothesis and Proposed research model

This study aimed to investigate the factors that affect the behavioral intention to use Bitcoin. The proposed model was based on the unified theory of acceptance and use of technology UTAUT2 (Venkatesh et al., 2012).

3.1.1 Hypothesis

3.1.1.1 Performance Expectancy (PE)

E describes a user's belief that the use of Bitcoin currency provides many benefits in their life (Venkatesh et al., 2003). In previous studies, PE has been proved to significantly affect user's behavioral intention in the context of cryptocurrencies (Arias-Oliva et al, 2019), (Rodenrijs and Wokke, 2018) and (Venkatesh et al, 2012); mobile banking (Saparudin et al, 2020) and (Oliveira and Popovi⬚, 2014). Thus, the following hypothesis is proposed:

H1: There is a significant and positive linear relationship between Performance Expectancy and user›s behavioral intention to use Bitcoin.

3.1.1.2   Effort Expectancy (EE)

EE is defined as the degree of ease associated with the use of a specific technology (Venkatesh et al, 2003). In previous studies, EE has been confirmed to significantly affect user's behavioral intention in the context of cryptocurrencies (Arias-Oliva et al, 2019), (Kumpajaya and Dhewanto, 2015) and (Venkatesh et al, 2012); mobile banking (Saparudin et al, 2020) and (Oliveira and Popovi⬚, 2014). So, the following hypothesis is proposed:

H2: There is a significant and positive linear relationship between Effort Expectancy and user›s behavioral intention to use Bitcoin.

3.1.1.3 Social Influence (SI)

SI is defined as the degree to which a person perceives what others believe that he or she should use a specific technology (Venkatesh et al, 2003), (Mohamed, 2017) found that SI is a significant factor of users' behavioral intention to use crypto currenices, also (Raeisi, 2016) was proved that SI is a significant factor of the user's behavioral intention to use Information Systems, (Saparudin et al., 2020) and (Oliveira and Popovi⬚, 2014) in the context of mobile banking. So, the following hypothesis is proposed:

H3: There is a significant and positive linear relationship between Social influence and user›s behavioral intention to use Bitcoin.

3.1.1.4 Facilitating Conditions (FC)

FC means that users have the resources and knowledge necessary to use Bitcoin. Users should pay the costs of using Bitcoin, such as communication fees and service fees. In previous studies, FC is a significant factor of user's behavioral intention in the context of crypto currencies (Venkatesh et al, 2003) and (Mohamed, 2017); in the context of Information Systems (Raeisi, 2016); Transportation Technology (Isradila and Indrawati, 2017); E-Lirary (Ayele and Sreenivasarao, 2013); mobile Internet as an ICT Application (Alwahaishi and Snásel, 2013). So, the following hypothesis is proposed:

H4: There is a significant and positive linear relationship between Facilitating conditions and user›s behavioral intention to use Bitcoin.

3.1.1.5 Price Value (PV)

PV is defined as "the cognitive trade-off between the perceived benefits of the applications and the monetary costs of using them (Venkatesh et al, 2012:161). The price value can be positive or negative; depending if the perceived benefits exceed the monetary costs of using the technology (Venkatesh et al, 2012). (Alwahaishi and Snásel, 2013) have proved that PV is a significant factor in consumer behavioral intention in the context of the mobile Internet as an ICT Application. So, the following hypothesis is proposed:

H5: There is a significant and positive linear relationship between Price Value and user's

behavioral intention to use Bitcoin.

3.1.1.6 Perceived Risk (PR)

PR is defined as "the potential loss in searching for a desired result through the use of an electronic service (Featherman and Pavlou, 2003:3). Users are always afraid of losing money through transactions, losing passwords, and making mistakes on the platform, so the perceived risk factor is a very important factor in technology adoption, and has been added to the model. In previous studies, PR has been shown to significantly influence user behavioral intent in the context of Bitcoin (Kumpajaya and Dhewanto, 2015); mobile banking (Oliveira and Popovi⬜, 2014) and (Saparudin et al, 2020). So, the following hypothesis is proposed:

H6: There is a significant and negative linear relationship between perceived risk and user›s behavioral intention to use Bitcoin.

3.1.1.7 Al Shariah Compliance (SHC)

SHC factor has become very important to adopt Cryptocurrencies in Islamic countries, so it was proposed and added to the study model. There aren't any previous studies including this factor. The following hypothesis is proposed:

H7: There is a significant and positive linear relationship between Al Shariah Compliance and user›s behavioral intention to use Bitcoin.

Factors (Habit and Hedonic Motivation) were not used in the proposed model, as it was clear from previous studies that they did not affect the intention of using crptocurrencies.

3.1.2 Proposed research model

The following figure shows the proposed research model:
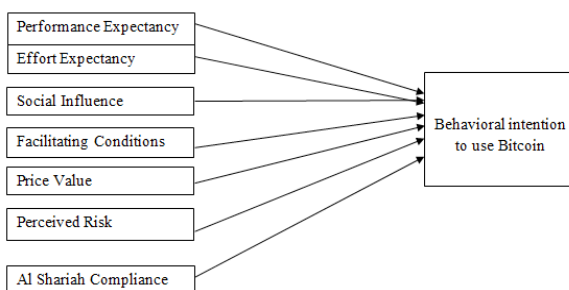
Figure (2)
Research Proposed Model (UTAUT2+SHC)

The previous figure includes:

First: independent variables PE, EE, SI, FC, PV, PR and SHC

Second: dependent variable was behavioral intention to use Bitcoin.

Behavioral Intention (BI) is the individual willingness to use and continue to use a technology, and the factor that determines the usage of a technology (Venkatesh et al, 2012).

Third: In order to limit the research, this study will not use the factors (age, gender, and experience) which have medium effects on factors that affect behavioral intention to use a technology.

3.2 Research Methodology

The research relied on a descriptive analytical approach. The primary data was collected through the questionnaire for a study and statistical methods were used to analyze the data that was collected from the research sample. The secondary sources were also used, which are previous studies, references, periodicals and the Google search engine.

Also, a quantitative research method is used to test the proposed research model and examine the relationship between the dependent variable, which is the behavioral intention to use Bitcoin, and the seven independent variables (PE, EE, SI, FC, PV, PR, and SHC). Through the questionnaire, the quantitative data will be collected and further analyzed through the SPSS program. The SPSS results will determine the rejection or acceptance of the proposed hypotheses.

3.2.1 Population and Sample

Since the individuals who are willing to use Bitcoin in Saudi Arabia are unknown and difficult to access, we will therefore use the non-probability sampling method to determine the research population.

In non-probability sampling designs, the elements in the population do not have any probabilities attached to their being chosen as sample subjects. This means that the findings from the study of the sample cannot be confidently generalized to the population. Also, researchers may at times be less

concerned about generalizability than obtaining some preliminary information in a quick and inexpensive way (Sekaran, 2003:276). Sometimes non-probability sampling can be the only way to obtain data. Some of the non-probability sampling plans are more dependable than others and could offer some important leads to potentially useful information with regard to the population (Sekaran, 2003:276). The population consists of the students, professors and employees in Qassim University, Buraydah Private Collages and Onaizah Private Collages. It was ensured that all members of the research population had basic knowledge of the Internet and technological and financial knowledge.

The research population relied on previous studies that justify the selection of a highly educated sample as a way to ensure that respondents have a higher level of financial and technical knowledge, and to ensure that the data collected is appropriate for the purpose of the research (Mohamed, 2017), (Kumpajaya and Dhewanto, 2015) and (Alwahaishi and Snásel, 2013).

Purposive sampling is a non-probability sampling method and it occurs when elements selected for the sample are chosen by the judgment of the researcher. Researchers often believe that they can obtain a representative sample by using a sound judgment, which will result in saving time and money (Black, 2010:225).

The purposive sample method was chosen to define the research sampling, where data is collected from Saudi individuals who live in the Emirate of Al-Qassim in Saudi Arabia. A purposive sample consisted of (400) to whom the questionnaire link was sent via e-mail, 365 responses were received from the sample. 12 responses were not valid for analysis and were deleted, and the number of valid responses for statistical analysis was (353) by 88%. The following table shows the distribution of the respondents according to demographic variables.

Table (1)
Demographic Variables for Research

Variable	Category	No.	Ratio %
Gender	Male	213	60.3
	Female	140	39.7
Age	Less 20 year	0	0.0
	20 - 30 year	188	53.3
	3140- year	142	40.2
	4150- year	23	6.5
	51 and more	0	0.0
Occupation	Students	113	32.0
	Employees	141	39.9
	Professors	34	9.6
	Engineers	53	15.0
	Doctors	12	3.4
	Others	0	0.0
Income	Less than 4000 SR	32	9.1
	4000 - 8000 SR	112	31.7
	More than 8000 SR	209	59.2
Sector	Governmental sector	243	68.8
	Private sector	110	31.2

It was explained from table (1):

- Gender variable: Most of respondents were male by 60.3%, where 39.7% were female. This result shows that there are more males using Bitcoin than females. This result agrees with results from (Mohamed, 2107), (Kumpajaya and Dhewanto, 2015), (Rodenrijs and Wokke, 2018), (Skoumpopoulou et al., 2014) and (Oliveira and Popovič, 2014)

- Age variable: 5.3% were aged from 20 to 30, 40.2% were aged from 31 and 40, and then 6.5% between 41 and 50 years old. There were no respondents less than 20 years old and over 50 years old in this study. Therefore, young people have an intention of using Bitcoin. This result agreed with (Saparudin, 2020), (Ayele and Sreenivasarao, 2013), (Kumpajaya and Dhewanto, 2015), (Mohamed, 2107), (Rodenrijs and Wokke, 2018), (Skoumpopoulou et al., 2014) and (Oliveira and Popovič, 2014).

- Occupation variable: 39.9% of respondents were employees, and then 34.1% of respondents were students, and then 15% of respondents were engineers and the lower ratio were professors (9.6%) and doctors (3.4%).

- Income: 59.2% of respondents get monthly income (more than 8000 SR), and 31.7% of respondents get monthly income (4000 – 8000 SR), 9.1% of respondents get monthly income (less than 4000 SR).

- Sector: 68.8% of respondents were members of the governmental sector, and 31.2% of respondents were members of the private sector. This result is agreed with (Saparudin, 2020).

3.2.2 Describe the content of the research tool

The questionnaire relied upon as the primary source for gathering the necessary information from the research sample. The questions in each part were identified by reference to previous studies and benefit from related literature such as Venkatesh et al. (2003); Venkatesh et al. (2012); Mohamed (2017); Olive, (2019(.

The questionnaire consists of two parts as follows: The first section includes the demographic information (gender, age, occupation, sector, income and the reasons for using Bitcoin.

The second section: It includes 31 paragraphs distributed into seven themes, for the independent variables, and the eighth theme for dependent variables. The paragraphs are designed to measure the level of using Bitcoin and the hypothesis of the research based on graded answers according to the use of the Likert pentatonic model, as follows:

• Performance Expectancy (PE): This theme includes (4 sentences) which follows the 5 Likert scale.

• Effort Expectancy (EE): This theme includes (4 sentences) which follows the 5 Likert scale.

• Social Influence (SI): This theme includes (3 sentences) which follows the 5 Likert scale.

• Facilitating Conditions: This theme includes (4 sentences) which follows the 5 Likert scale.

• Price Value (PV): This theme includes (3 sentences)

which follows the 5 Likert scale.

• Perceived Risk (PR): This theme includes (3 sentences) which follows the 5 Likert scale.

• Al Shariah Compliance (SHC): This theme includes (6 sentences) which follows the 5 Likert scale.

• Behavioral Intention to use: This theme includes (4 sentences) which follows the 5 Likert scale.

The weighted average for this measure is as shown in the following table:

Table (2)
Weighted Average For 5 Likert Scale

Level of agreement	5 Likert Scale
Strongly disagree	1 – 1.79
Disagree	1.80 – 2.59
Neutral	2.60 – 3.39
Agree	3.40 – 4.19
Strongly agree	4.20 – 5

3.2.3 Reliability and Validity Analysis

The validity: To verify the validity of the study tool, the questionnaire was presented to a group of judgers in the field of information and communication technology, in order to get acquainted with their views in the questionnaire in terms of: the correctness of the language formulation of the paragraphs, the inclusion of paragraphs for all the themes of the questionnaire, and the relevance of the questionnaire to the research objectives. The judgers› modifications were taken in terms of deleting the incorrect paragraphs and language errors were corrected. Before sending the questionnaire to research sampling, a pilot test was done with 10 participants. Participants were asked to evaluate whether the content is easy to understand.

Reliability Analysis

Cronbach's alpha was used in this study to test the reliability and internal consistency of the individual factors of the proposed research model and the model as a whole. If the value of Cronbach's alpha is below 0.70, this would indicate that the reliability

of the data is unacceptable..

Table (3)
Reliability Analysis

No.	Factors of the Proposed Research Model	Cronbach's Alpha
1	PE	0.862
2	EE	0.888
3	SI	0.809
4	FC	0.802
5	PV	0.821
6	PR	0.925
7	SHC	0.926
8	BI	0.891
Cronbach's Alpha for all model		0.866

It is clear from the previous table that all the coefficients of persistence were high. The model reliability coefficient is 0.87, which exceeded 0.7. This indicates the availability of a high degree of credibility and internal stability of the answers.

3.2.4 Applying questionnaire

The electronic questionnaire was created on Google Drive and its URL is as follows:

https://docs.google.com/forms/d/e/1FAIpQLSeLFM Cc51hJW2RMvGXoC52A7xKHeRN90jXandeCk35 kqAzo3A/viewform

It was sent to research sampling from Aug. 2021 to Oct. 2021.

3.2.5 Statistical treatment

This study was based on the disclosure of factors affecting the use of Bitcoin currency and the fact that the study is descriptive and analytical, and for the purpose of analyzing data on study variables and hypothesis testing, statistical methods appropriate to the nature of available data, which have been used as follows:

- The Cronbach Alpha Stability Test for Internal Consistency to measure the reliability of the study instrument
- Descriptive statistics:
o Frequencies and percentages were used to describe the characteristics of the study sample.

o Mean and standard deviations were used to analyze questions.

- Test hypotheses by:

o Multicollinearity: before making multiple regression analysis, it is important that the data does not suffer from multicollinearity.

o Pearson Correlation was used to examine the relationship between independent variables and the dependent variable.

o Multiple regression analysis was used to examine the factors in the proposed research model, using the SPSS software. More explicitly, if the independent factors (PE, EE, SI, FC, PV, PR, SHC) affect the dependent factor, behavioral intention to use Bitcoin (BI).

4- Results

4.1 Questions answers

First question: Do customers use Bitcoin or do customers intend to use it in the future?

Table (4)
Use Bitcoin or Intention to Use It In The Future

Items	No.	Ratio %
Use Bitcoin actually	91	25.80
I have Intention to use Bitcoin in the	158	44.80
I don't have intention to use Bitcoin	104	29.40
Total	353	

It was explained from table (4):

• 25.8% from responses who use Bitcoin in the recent.

• 44.8% from responses have intention to use Bitcoin in the future.

• 29.5% from responses don't have any intention to use Bitcoin.

• Total respondent who used Bitcoin or have intention to use it in the future =249.

Second question: What are the reasons for using or plan to use Bitcoin? The following table includes the results for answering to first question:

Table (5)
The Reasons for Using or Have Intention to Use Bitcoin

Items	No.	Ratio %
Electronic Payments	42	18.8
Investment	186	83.4
International money transfers	0	0
Savings	21	9.4
Total	249	100.0

Table (5) shows the results for the reasons to use or plan to use Bitcoin as follows:

• The majority of respondents by (83.4%) use or have intention to use Bitcoin for investment, followed by respondents who use or have intention to use Bitcoin for Electronic Payments by percentage (18.8%).

• 9.4% of respondents who use or have intention to use Bitcoin for saving money.

• There were no respondents who agreed to use Bitcoin for International money transfers.

• These results agreed with (Mohamed›s study, 2017), which proved that the highest perception of using crptocurrencies in investment, followed by transactions/Payments.

Third question: What are the factors that affect the users' behavioral intention to use Bitcoin in Saudi Arabia? The following table includes the results for answering to third question:

Table (6)
Means and Standard Deviations or The Factors That Affect The Users' Behavioral Intention to Use Bitcoin in Saudi Arabia

Variables	Mean	standard deviation	Agree
Performance Expectancy	3.64	1.1341	Agree
Effort Expectancy	4.42	1.2300	Strongly agree
Social Influence	3.21	1.1900	Netural
Facilitating Conditions	3.48	0.6100	Netural
Price Value	4.13	0.6000	agree
Al Shariah Compliance	4.75	0.5800	Strongly agree
Perceived Risk	4.61	0.7833	Strongly agree
Behavioral Intention	4.37	0.7422	Strongly agree

The table above indicates that most respondents strongly agreed and agreed with the statements. The answers of the research sample were neutral to the axis social influence and facilitating conditions.

4.2 Hypotheses test

This part includes the results for the hypothesis test, and the research relied on inferential-deductive statistics to show the effect of independent variables on the dependent variable at a significant level (a◻0.05), where multiple Linear Regression was used to know that if there is a significant effect of the variables Independent on the dependent variable to use Bitcoin behaviorally at the significance level (0.05).

4.2.1 Pearson Correlation Coefficient

The Pearson correlation coefficient was used to analyze, measure, and test the correlations between each independent variable of the study variables and between the dependent variable, and the following table shows the strength of the correlation between the study variables:

Table (7)
Pearson Correlation

Variables	PE	EE	SI	FC	PV	PR	SHC	BI
PE	1							
EE	0.672	1						
SI	0.521	0.543	1					
FC	0.434	0.456	0.589	1				
PV	0.304	0.454	0.420	0.434	1			
PR	- 0.634	- 0.619	- 0.633	- 0.559	- 0.631	1		
SHC	0.621	0.544	0.456	0.301	0.205	0.609	1	
BI	0.521	0.432	0.602	0.407	0.410	0,556	0.303	1

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

It is clear from table (7) that the Pearson correlation coefficient is positive and strong in the previous cases, which indicates that there is a positive relationship between all independent factors and the dependent factor, except perceived risk variable, where the relationship was negative. It is also noticed that the Pearson Correlation

Coefficient between all of our independent variables is less than 0.70, this indicates that data does not have problems from multi-collinearity (Pallant, 2001:122).

4.2.3 Multiple Linear Regression
(a) Multi-Collinearity Test

A multi-Collinearity test was used to ensure that there is no high correlation between the independent variables by applying the Variance inflation factor (VIF) and the Tolerance Test, on each of the independent variables, where each variable must be independent from the other variables. VIF should not exceed the value (10).

Table (8)
Multi-Collinearity Test

Variables	Tolerance	VIF
PE	.407	2.43
EE	.567	2.29
SI	.682	3.36
FC	.429	1.47
PV	.535	1.59
PR	.537	3.29
SHC	.674	2.44

It is clear from table (8) that the values of VIF for all independent variables are less than (10) where the values ranged from 1.47 to 3.36. The values of the Tolerance test for all independent variables are greater than (0.05) and ranged from 0.407 to 0.682, so there is no high correlation problem between the independent variables.

(b) Model Summary

Table (9)
Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.831**	0.891	0.859	0.2655

a. Predictors: (Constant) Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Price Value, Al Shariah Complaince, Perceived Risk.
b. Dependent Variable: Behavioral Intention to use

Table (9) shows that the value of the correlation coefficient R = 0.831, which is a high value, indicates the correlation strength between the independent variables (PE, EE, SI, FC, PV, PR, SHC) and the dependent variable (BI), the adjusted R^2 measures the proportion of the total variability in the dependent variable (BI), which is explained by the independent variables of the model. The value of the adjusted R^2 is 0.859, which indicates that the independent variables have the ability to explain 85.9% of the change in the dependent variable (behavioral intention to use Bitcoin).

(c) ANOVA

Table (10)
ANOVA

Model	Sum of Square	DF	Mean Square	F	Sig
Regression	512.068	4	65.507		
Residual	219.672	118	2.402	815.178	0.001b
Total	731.74	222			

a. Predictors: (Constant) Performance Expectancy, Effort Expectancy, Social Influence, Facilitating Conditions, Price Value, Al Shariah Complaince, Perceived Risk.
b. Dependent Variable: Behavioral Intention to use

If the p-value (Sig) is smaller than 0.05, the model can significantly predict the dependent variable. In the ANOVA table, the p-value is 0.001, which is lower than 0.05, and lower than 0.01. So there is strong proof that the proposed research model has explanatory power and that the independent variables help to predict the dependent variable.

In table (11) coefficients (Standardized and unstandardized) linear regression equation were tested, to know which variables have influence on the dependent variable.
(d) Coefficients

Table (11)
Coefficients a

Model	Unstandardized Coefficients		Standardized Coefficients Beta	T	P-Value (Sig)	Hypotheses Decision
	B	Std. error				
Constant	0.567	1.08		0.456	0.642	
PE	0.363	0.09	0.423	2.437	0.000	H1: Accepted
EE	0.256	0.06	0.187	2.984	0.002	H2: Accepted
SI	0.132	0.34	0.076	1.654	0.172	H3: rejected
FC	0.178	0.26	0.234	2.872	0.086	H4 rejected
PV	0.208	0.08	0.358	1.843	0.004	H5: Accepted
PR	- 0.214	0.23	- 0.608	- 0.896	0.001	H6: Accepted
SHC	0.474	0.51	0.276	1.094	0.003	H7: Accepted

a. Dependent Variable: Behavioral Intention to use

5- Discussion

- If the value of Sig. for the independent variable is smaller than 0.05, then it can be used to predict the dependent variable. Table (11) shows that the value of Sig. is lower than 0.05 for PE, EE, PV, PR, and SHC. So, these factors have a significant predicative ability for the dependent variable, and have an effect on the dependent variable. The value of Sig. is bigger than 0.05 for SI and FC, which indicates that there is no significant linear relationship between these independent variables and the behavioral intention to use Bitcoin. This means that SI and FC cannot predict the behavioral intention to use Bitcoin.

- B coefficient explains the relative importance of each independent variable in predicting the dependent variable. Al Shariah compliance followed by Performance Expectancy has the highest B coefficient; value among all the other factors; 0.474, 0.363 respectively. So these two factors have the biggest effect on the behavioral intention to use Bitcoin.

- The B coefficient values for some factors (PE, EE, PV and SHC) are positive, therefore. there is a positive and strong relationship with the behavioral intention to use Bitcoin with these independent variables.

- The B coefficient values for factors SI and FC are positive and p-value>0.05, therefore, there is no relationship with the behavioral intention to use Bitcoin with these independent variables.

- The B coefficient value for the perceived risk factor is negative and p-value<0.05, therefore, there is a negative relationship with the behavioral intention to use Bitcoin with perceived risk.

- The p-value (Sig) of PE is 0.000, which is lower than 0.05 and 0.01. So, there is a significant linear relationship between performance expectancy and the user's behavioral intention to use Bitcoin. The B coefficient of PE (0.363) is statistically significantly different from 0, so it affects the behavioral intention to use Bitcoin positively. So, this hypothesis is accepted. . This explains that the more people find Bitcoin useful, the more they will have the intention of using this crypto currency. This result is agreed with (Oliva et al., 2019), (Kwmpajaya and Dhewanto, 2015), they proved that PE of the technology is the strongest determinant of user's intentions to use cryptocurrencies. Also, previous research about acceptance and using different technology, by ((Alwahaishi and Snasel, 2013), (Saparudin, 2020); (Sarfaraz, 2017), (Oliveira and Popovi□ (2014), (Ayele1 and Sreenivasarao (2013) agreed with this result. On the other hand, studies which were done by (Mohamed, 2017), (Raeisi and Behboudi, 2016) disagreed with this result.

- The p-value of EE is 0.002, which is lower than 0.05. So, there is a significant linear relationship between effort expectancy and behavioral intention to use Bitcoin in Saudi Arabia. The B coefficient of EE (0.256) is statistically significantly different from 0, so it affects the behavioral intention to use Bitcoin positively. Thus, this hypothesis is accepted. This result agreed with previous research which was done by (Oliva et al., 2019), (Kumpajaya and Dhewanto, 2015), they proved that EE is the strongest determinant of user's intentions to use cryptocurrencies. This result also agrees with previous research on mobile banking acceptance, which was done by ((Alwahaishi and Snasel, 2013), (Saparudin, 2020), (Sarfaraz, 2017), (Oliveira and Popovič, 2014). Some research on different technology acceptance agreed with our result,

which was done by (Isradila and Indrawati, 2017), (Raeisi and Behboudi, 2016), (Skoumpopoulou et al., 2014), (Ayele1 and Sreenivasarao (2013). On the other hand, (Mohamed, 2017), (Rodenrijs and Wokke, 2018) disagreed with this result, which concluded that there is no significant relationship between EE and the intention to use Bitcoin.

- The p-value of SI is 0.172 and bigger than 0.05. So, there is no significant linear relationship between SI and behavioral intention to use Bitcoin. So, this hypothesis is rejected. Users are not influenced by the opinions and suggestions of family and friends who think they should or should not use Bitcoin. Oliva et al., (2019) agreed with our result, where they investigated cryptocurrencies acceptance and found that social influence could not affect the behavioral intention to use cryptocurrencies. Also, Sarfaraz, (2017), (Isradila and Indrawati, 2017), and (Skoumpopoulou et al., 2014) agreed with our result, where they concluded that there is no significant relationship between SI and the intention to use different technology. On the other hand, (Saparudin, 2020), (Saparudin, 2020), (Oliveira and Popovi, 2014), (Raeisi and Behboudi, 2016), (Ayele and Sreenivasarao, 2013) disagreed with our result, who proved that there is significant relationship between SI and behavioral intention to use technology. (Mohamed, 2017) investigated crptocurrencies acceptance and found that Social Influence has weak effect on behavioral intention to use crptocurrencies.

- The p-value of FC is 0.086, which is bigger than 0.05. Hence, there is no significant linear relationship between FC and the user's behavioral intention to use Bitcoin. Thus, this hypothesis is rejected. This means that the customer's possession of the necessary equipment and equipment to use the service, the speed and continuity of the Internet connection, and encouraging the government to use the service does not affect the customers' decision to use the banking internet, and this is consistent with the conclusion of the theory (Venkatesh, 2003) that the effect of FC is strong in the mandatory work environment. Our result

agreed with (Oliveira and Popovi, 2014), (Isradila and Indrawati, 2017), (Skoumpopoulou et al., 2014), who proved that there is no significant linear relationship between FC and the user's behavioral intention to use technology. On the other hand, (Oliva et al., 2019), (Mahomed, 2017), (Alwahaishi and Snásel, 2013), (Raeisi and Behboudi, 2016), (Ayele and Sreenivasarao, 2013) disagreed with this result, who they proved that there is significant linear relationship between FC and the user's behavioral intention to use technology.

- The p-value of PV is 0.004, and lower than 0.05. So, there is a significant linear relationship between PV and behavioral intention to use Bitcoin. The B coefficient of PV (0.208) is statistically significantly different from 0, and affects the behavioral intention to use Bitcoin positively. Thus, this hypothesis is accepted. This result indicates that the price value factor impacts the willingness to use this currency in Saudi Arabia. This result is supported in the study conducted by empirical research done by (Venkatesh et al., 2012). Also (Isradila and Indrawati, 2017) proved that the price value factor is significant for using online transportation technology in Indonesia. On the other hand, (Alwahaishi and Snásel, 2013) proved that the price value factor did not affect the behavioral intention to use mobile apps.

- The p-value of SHC is 0.003, which is lower than 0.05. So there is a significant linear relationship between Al Shariah compliance and behavioral intention to use Bitcoin. Thus, this hypothesis is accepted. If Al Shariah Scholars supported Bitcoin transactions and said that Bitcoin is Halal currency, people would want to use this currency in Islamic countries. So, the compliance of cryptocurrencies with the shariah law will encourage the acceptance of cryptocurrencies.

- The p-value of Perceived Risk is 0.001, which is lower than 0.05. So, there is a significant linear relationship between perceived risk and behavioral intention to use Bitcoin. The B coefficient of PV is (-0.214), so it affects the behavioral intention to use Bitcoin negatively. Thus, this hypothesis is

accepted. Many users still treat Bitcoin with caution because there is no legal legislation and customer protection in most Arab countries. (Kumpajaya and Dhewanto, 2015), (Sarfaraz, 2017), (Oliveira and Popovi⬚, 2014) agreed with this result, which proved that there is a significant linear relationship between Perceived Risk and behavioral intention to use technology. On the other hand (Oliva et al., 2019) disagreed with this result; they proved that there is no significant linear relationship between perceived risk and behavioral intention to use technology (mobile banking).

6. Conclusion

The purpose of this research was to identify the factors that affect the behavioral intention to use Bitcoin in Saudi Arabia. Based on the previous technology acceptance studies and the UTAUT 2 model, this study proposed research model (Fig. 2) and hypothesized seven factors that affect the users' behavioral intention to use Bitcoin. Quantitative analyses were implemented to test the hypotheses, and provide the source for answering research question and of this study. The tested research model is depicted in Figure 3 below, and Table 12 summarizes the factors that were proved to be significant.

Research question: What are the factors that affect the users' behavioral intention to use Bitcoin in Saudi Arabia?

The results of the hypotheses testing show that PE, EE, PV, PR and SHC directly affect and are determinants of the behavioral intention to use Bitcoin in Saudi Arabia. Moreover, results indicate that Al Shariah compliance has the strongest influence on the user's behavioral intention to use Bitcoin. The second strongest factor that affects the behavioral intention to use Bitcoin is Performance Expectancy. Consequently, the third most influential factor is Effort Expectancy, and lastly, Price Value. Furthermore, results also showed that SHC, PE, EE, and PV all affect positively the behavioral intention to use Bitcoin, and PR affects negatively the behavioral intention

to use Bitcoin. These results are in consistence with previous technology acceptance theories. The two independent factors of the proposed research model, Social Influence, Facilitating Conditions were rejected to statistically significantly; affect the behavioral intention to use Bitcoin in Saudi Arabia.

Table (12)
Summary of Significant Factors

Variables	B coefficient	Sig.
Al Shariah Compliance	0.474	0.003
Performance expectancy	0.363	0.000
Effort Expectancy	0.256	0.002
Perceived Risk	0.214	0.001
Price Value	0.208	0.004

Note: B coefficient is the increment in Behavioral Intention to use Bitcoin for a change in a corresponding independent factor, when all the others independent factors are held constant; Sig. is the indicator that tells which factor has a significant impact on Behavioral Intention to use Bitcoin (if the Sig. value is less than 0.05, then the factor has a significant impact).

The following figure explains the proposed research model after hypotheses testing:
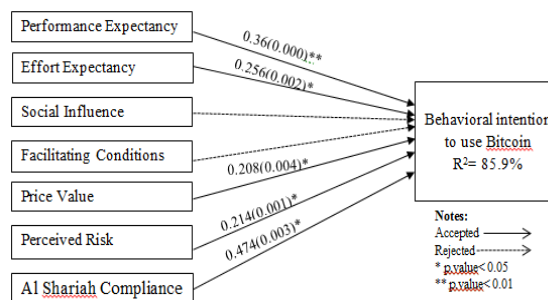

Figure (3)
The Proposed Research Model after Hypotheses Testing

7- Recommendations

1. The perceived risk of cryptocurrency transactions is still very high. Therefore, policymakers in arab countries need to issue laws regarding the use of

cryptocurrency and protect its users.

2. There is a need for a monitoring organization to regulate the operation of the cryptocurrency according to Islamic rule to encourage increasing the acceptance for using it.

3. There is a need for more studies about cryptocurrencies, especially Bitcoin, about the extent of compatibility with Islamic moral economy, which is included financing and investments linked to the real economy. Some of shariah scholars consider that investments in digital assets which are not linked to the real economy could harm the society.

4. Bitcoin investors should insure that any return on Bitcoin investments would be lawful and Shariah compliant.

8- Research Limitations

There are several limitations in this research.

1. Most of respondents were employees in educational institutions, aged between 2030- years, highly educated people whose behavior might differ somewhat from population who possess reduced Internet skills, which meaning that the sample cannot accurately include all target population. Therefore future researches must be done by using a more suitable and wide sample.

2. This research was only conducted in one city in Buraydah city (Qassim - Saudi Arabia), so the results of this research cannot be generalized to more population. Therefore, further research is needed that covers Bitcoin users in all cities in Saudi Arabia.

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